Appendix A

Public Resources Code (PRC), §41300-41460

41300.

(a) On or before July 1, 1992, each county shall prepare and adopt for the unincorporated area a county source reduction and recycling element which includes all of the components specified in this chapter and which complies with the requirements specified in Chapter 6 (commencing with Section 41780).

(b) Notwithstanding subdivision (a), if a county determines that it is unable to comply with the deadline established under subdivision (a) and unable to comply with Division 13 (commencing with Section 21000), to the extent that division requires the preparation and certification of an environmental impact report for the element, the county shall do all of the following:

(1) On or before July 1, 1992, the county shall adopt a resolution stating the reasons it is unable to comply with the deadline established under subdivision (a) and to complete and certify the environmental impact report for the element. The resolution shall also state a date when the county will comply with the deadline established under subdivision (a) and complete and certify the environmental impact report for the element.

(2) On or before July 1, 1992, the county shall submit a copy of the resolution adopted pursuant to paragraph (1) to the board.

(3) Upon completion and certification of the environmental impact report for the source reduction and recycling element, or December 1, 1992, whichever is sooner, the county shall adopt its source reduction and recycling element.

41301. The county source reduction and recycling element shall set forth a program for management of solid waste generated with the unincorporated area of the county, consistent with the waste management hierarchy provided in Section 40051.

41302. The county source reduction and recycling element shall place primary emphasis on implementation of all feasible source reduction, recycling, and composting programs while identifying the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced at the source, recycled, or composted.

41303. Each county source reduction and recycling element shall include, but is not limited to, all of the following components for solid waste generated in the jurisdiction of the plan:

(a) A waste characterization component.
(b) A source reduction component.
(c) A recycling component.
(d) A composting component.
(e) A solid waste facility capacity component.
(f) An education and public information component.
(g) A funding component.
(h) A special waste component.

41330.

(a) For the initial source reduction and recycling element of a countywide integrated waste management plan which is required to be submitted to the board pursuant to Section 41791, the count
waste characterization component shall identify the constituent materials which comprise the solid waste generated within the unincorporated area of the county. The information shall be representative of the solid waste generated and disposed of within that area and shall reflect seasonal variations. The constituent materials shall be identified by volume, percentage in weight or its volumetric equivalent, material type, and source of generation which includes residential, commercial, industrial, governmental, or other sources. Future revisions of waste characterization studies shall identify the constituent materials which comprise the solid waste disposed of at permitted disposal facilities.

(b) In adopting or revising regulations implementing subdivision (a), the board shall do all of the following:

(1) Permit the use of studies or data developed on a regional basis and adapted to the conditions which exist in a county preparing its waste characterization component.

(2) Permit the use of preexisting data or studies, including those data and studies prepared by local governments with similar waste characteristics.

(3) Require only that amount of seasonal sampling, and waste characterization only of those categories of waste, necessary to achieve the diversion requirements of paragraph (1) of subdivision (a) of Section 41780.

41331. Any waste characterization component prepared by a county pursuant to Section 41330, and any other information submitted by a county to the board on the quantities of solid waste generated, diverted, and disposed of, shall include data which is as accurate as possible, on the quantities of solid waste generated, diverted, and disposed of, to enable the board, to the maximum extent possible, to accurately measure the diversion requirements established under paragraph (1) of subdivision (a) of Section 41780.

41332. For the first revision, and any subsequent revision, of a source reduction and recycling element of a countywide integrated waste management plan which is required to be submitted to the board pursuant to Section 41770, the county waste characterization component shall identify the constituent materials which comprise the solid waste disposed of within the unincorporated area of the county. The information shall be statistically representative of the solid waste disposed of within that area and shall reflect seasonal variations. The constituent materials shall, to the extent practicable, be identified by volume, percentage in weight, or its volumetric equivalent, material type, and source of generation, which includes residential, commercial, industrial, governmental, or other sources.

41333. Any waste characterization component prepared by a county pursuant to Section 41332, and any other information submitted by a county to the board on the quantities of solid waste disposed of, shall include data which is as accurate as practicable, on the quantities of solid waste generated, diverted, and disposed of, to enable the board, to the maximum extent possible, to accurately measure the diversion requirements of paragraph (2) of subdivision (a) of Section 41780.

41350. The county source reduction component shall include a program and implementation schedule which shows the methods by which the county will, in combination with the recycling and composting components, reduce a sufficient amount of solid waste disposed of within the unincorporated area of the county to comply with the diversion requirements of Section 41780.

41351. The county source reduction component shall describe the types of materials which will be reduced under the programs in Section 41350.

41352. The county source reduction component shall describe the methods that the county will use to determine the categories of solid wastes to be diverted from disposal at a disposal facility through source reduction.

41353. The county source reduction component shall describe new facilities, and of expansion of existing facilities, which will be needed to implement the source reduction component.

41354. The county source reduction component shall evaluate and identify rate structures and fees to reduce the amount of wastes that generators produce, and other source reduction strategies, including, but not limited to, programs and economic incentives to reduce the use of nonrecyclable materials, replace disposable materials and products with reusable materials and products, reduce packaging, and increase the efficiency of the use of paper, cardboard, glass, metal, and other materials.

41370. The county recycling component shall include a program and implementation schedule which shows the methods by which the county will, in combination with the source reduction and composting components, reduce a sufficient amount of solid waste disposed of within the unincorporated area of the county to comply with the diversion requirements of Section 41780.

41371. The county recycling component shall describe the types of materials which will be recycled under the programs in Section 41370.

41372. The county recycling component shall describe the methods that the county will use to determine the categories of solid wastes to be diverted from disposal at a disposal facility through recycling.

41373. The county recycling component shall describe new facilities, and expansion of existing facilities, which will be needed to implement the recycling component.

41374. The county recycling component shall describe methods which will be used to increase markets for recycled materials, including, but not limited to, an evaluation of the feasibility of procurement preferences for the purchase of recycled products. Each county may grant a price preference to encourage the purchase of recycled products. The amount of the price preference shall be determined by the county.

41375. The county recycling component shall evaluate industrial, commercial, residential, governmental, and other curbside, mobile, dropoff, and buy-back recycling programs, manual and automated material recovery facilities, zoning, and building code changes which encourage recycling of materials, and rate structures which encourage recycling of materials.

41400. The county composting component shall include a program and implementation schedule which shows the methods by which the county will, in combination with the source reduction and recycling components, reduce a sufficient amount of solid waste disposed of within the unincorporated area of the county to comply with the diversion requirements of Section 41780.

41401. The county composting component shall describe the types of materials which will be composted under the programs in Section 41400.

41402. The county composting component shall describe the methods that the county will use to determine the categories of solid wastes to be diverted from disposal at a disposal facility through composting.

41403. The county composting component shall describe new facilities, and expansion of existing facilities, which will be needed to implement the composting component.

41404. The county composting component shall describe methods which will be used to increase the markets for composted materials, including, but not limited to, an evaluation of the feasibility of procurement preferences for the purchase of recycled products. Each county may grant a price preference to encourage the purchase of composted products. The amount of the price preference shall be determined by the county.

41420. The county education and public information component shall describe to the board how the county will educate and inform its citizens about the source reduction, recycling, and composting programs.

41430. The county funding component shall identify and specifically describe projected costs, revenues, and revenue sources the county will use to implement all components of the county source reduction and recycling element.

41450. The county special waste component shall describe existing waste handling and disposal practices for special wastes, including, but not limited to, asbestos and sewage sludge which is not hazardous waste.

The component shall identify current and proposed programs to ensure the proper handling, reuse, and long-term disposal of special wastes. The component shall address the disposition of sewage sludge generated in the jurisdiction of the county.

41460. The county solid waste facility capacity component shall include, but is not limitied to, a projection of the amount of disposal capacity which will be needed to accommodate the solid waste generated within the unincorporated area of the county preparing the element for a 15-year period, reduced by all of the following:

(a) Implementation of source reduction, recycling, and composting programs required by this part or through implementation of other waste diversion programs.

(b) Any permitted disposal or transformation capacity which will be available during the 15-year planning period.

(c) All disposal or transformation capacity which has been secured through an agreement with another city, county, or through an agreement with a solid waste enterprise.

Appendix B

Title 14, Division 7, Chapter 9, Articles 6.1 and 6.2,
§18722 through 18748

Article 6.1. Solid Waste Generation Studies

Section 18722. Solid Waste Generation Studies--General Requirements.

(a) Relation to Waste Characterization Component. For the purposes of this Chapter, a solid waste generation study constitutes the waste characterization component of the SRR Element required by sections 41003, 41030, 41303 and 41330 of the Public Resources Code. Each jurisdiction shall prepare an initial solid waste generation study and all subsequent solid waste generation studies in accordance with the requirements of this Article. Additional specific requirements and guidelines for the initial solid waste generation study are defined in Section 18724 of this Article.

(b) Regional and Joint Solid Waste Generation Studies. Solid waste generation studies may be conducted by an individual jurisdiction for solid waste generated within that jurisdiction, or jointly by two or more jurisdictions for solid waste generated within the participating jurisdictions.

(c) Solid Waste Generation Data Projections. All solid waste generation studies shall include a 15-year projection of the solid waste to be generated within the jurisdiction, and diverted and disposed by the jurisdiction. The projected time period shall commence from the date of the local adoption of a SRR Element. The projection is to include the amounts, waste categories and waste types generated, diverted from disposal, and disposed, for each year of the 15-year period, under (1) the solid waste management system conditions and diversion activities existing at the time that the Solid Waste Generation study is prepared, and under (2) the solid waste management system conditions expected to be realized after a jurisdiction's implementation of its SRR Element and its attainment of the statutory diversion mandates.

(1) Acceptable information sources which may be used by the jurisdiction to determine and project changes in population, or in governmental, residential, industrial, and commercial operations, shall be the following:

(A) documented population data available from the California Department of Finance;

(B) documented employment data available from the California State Employment Development Department;

(C) documented industrial and commercial operations data available from the California Department of Commerce or from the California State Employment Development Department;

(D) documented data available in a local jurisdiction's adopted current General Plan;

(E) documented data available from published reports of local associations of governments and chambers of commerce;

(F) documented data available from the U.S. Census Bureau;

(G) documented jurisdiction-specific demographic, economic, and solid waste data developed and published by a jurisdiction in the course of the preparation of its Solid Waste Generation Study.

(d) **Annual Report on Solid Waste Generation.**

The annual report on the implementation of the SRR Element, required pursuant to Section 41821 of the Public Resources Code, shall contain the jurisdiction's analysis of the need to revise its solid waste generation study, including the need to revise its data on the sources of generation, diversion and disposal, and its data on categories and types of solid waste generated, diverted and disposed.

(e) Uses of Solid Waste Generation Data. Data obtained from a solid waste generation study shall be used to determine the total quantity of solid waste generated within the jurisdiction, and diverted and disposed,

for purposes of identifying the quantities and types of materials to be diverted from disposal pursuant to Sections 41780 and 41781 of the Public Resources Code.

(f) Measuring Solid Waste Quantity. In determining the aggregate quantity of solid waste generated, each jurisdiction shall use the following types of measurements: volume or weight. The conversion factors used to convert volume to weight, or weight to volume, shall be provided in the solid waste generation study and submitted to the Board in the SRR Element.

(1) Conversion Factors. The conversion factors used for measurement of the quantity of solid waste may be those from published sources and/or those derived from test measurements developed by a jurisdiction. A solid waste generation study shall cite all published sources of conversion factors used by a jurisdiction. For conversion factors derived from test measurements developed by a jurisdiction, a jurisdiction shall include in the solid waste generation study, a summary of the test measurement methods used. Conversion factors submitted by a jurisdiction are subject to approval by the Board at the time of the Board's consideration of approval of a jurisdiction's submitted SRR Element.

(A) By January 1, 1992, the Board shall complete a study and compile a list of acceptable conversion factors for each specific waste type listed in (j) of this section.

(2) Generation. For solid wastes sampled or estimated to be produced at the sources of generation, e.g., residential units and commercial units, or at solid waste transfer stations, the quantity of solid wastes generated shall be reported in weight. Data collected in terms of volume shall be converted to weight.

(3) Diversion. For solid wastes which are diverted from transformation and disposal facilities, and which are sampled by means of a quantitative field analysis at recycling, composting and solid waste reduction facilities, the quantities of solid waste which are diverted by means of recycling, composting or source reduction shall be reported in weight. Data collected in terms of volume shall be converted to weight. For solid wastes which are diverted from transformation and disposal facilities, and which are not sampled by means of a quantitative field analysis but which are estimated from existing records to be diverted from transformation or disposal facilities, the quantities of solid wastes which are diverted by means of recycling, composting or source reduction shall be reported in weight. Data collected in terms of volume shall be converted to weight.

(4) Transformation and Disposal. For solid wastes sampled or estimated to be received at solid waste transformation facilities and solid waste disposal sites, the quantity of solid wastes disposed shall be reported in both volume and weight. For solid wastes disposed in permitted solid waste landfills the volume measurement shall be expressed in terms of in-place volume in the landfill, after compaction, as measured in a waste cell in the upper lift of a waste management unit excluding the volume of cover material in the cell. For the purposes of this section, cell is defined in Section 17225.9, of Title 14 of the California Code of Regulations. For the purposes of this section, waste management unit is defined in Public Resources Code Section 43000(a).

(A) When solid waste volumes are recorded as uncompacted solid wastes or solid wastes compacted in refuse vehicles or solid waste transfer trailers, a jurisdiction shall state the conversion factors used to convert these volumes to in-place volumes in the landfill. A solid waste generation study shall cite all published sources of conversion factors for solid waste volumes used by a jurisdiction.

(5) Mixed Loads. If a refuse collection vehicle chosen for sampling has a mixed load of solid waste that is collected from more than one source of generation, or from more than one jurisdiction, a weight or volume fraction (i.e., the quantity) arising from each source of generation or jurisdiction along the collection route shall be estimated. This estimation shall be proportionally based on the number of residential, commercial and industrial units from the solid waste collection route sampled, and/or on the weight or volume of the contents of each refuse container which is sampled

at the source(s) of generation. Where the number of units, or weight or volume of each refuse container, are determined by a jurisdiction to be unavailable, a jurisdiction may use population estimates to proportionally allocate the origins of solid wastes.

(6) Weight to be Used for Compliance with Diversion Standards. The total weight of solid waste generated by a jurisdiction and diverted from disposal shall be the standard by which the Board shall measure a jurisdiction's compliance with the statutory diversion requirements of Section 41780 of the Public Resources Code.

(g) Determination of Solid Waste Generation. The total solid waste generated by a jurisdiction shall be the sum of the total solid waste disposed, as quantified in the solid waste disposal characterization, plus the total solid waste diverted from permitted solid waste landfills and transformation facilities through any combination of existing source reduction, recycling, and composting programs, as quantified in the solid waste diversion characterization.

(1) The total quantity of solid waste disposed shall include only solid waste transformed or disposed in permitted solid waste transformation or disposal facilities. Solid wastes placed in illegal dumps or unpermitted landfills cannot be counted as a part of the total solid waste generated, for the purposes of the Solid Waste Generation Study.

(2) Expressed as an equation, the total solid waste generated by the jurisdiction shall be computed as follows:

GEN = DISP + DIVERT

where:

GEN = the total quantity of solid waste generated within the jurisdiction.

DISP = the total quantity of solid waste, generated within the jurisdiction, which is transformed or disposed in permitted solid waste facilities.

DIVERT = the total quantity of solid waste, generated within the jurisdiction, which is diverted from permitted solid waste transformation and disposal facilities, through existing source reduction, recycling, and composting programs.

(h) Representative Sampling of Solid Waste. The solid waste generation study shall be performed in two (2) parts, consisting of:

(1) a representative determination of the composition and quantity of solid waste disposed within and by the jurisdiction, i.e., a waste disposal characterization, and,

(2) a representative determination of the composition and quantity of solid waste generated within the jurisdiction which is diverted from solid waste landfills and solid waste transformation facilities, i.e., a waste diversion characterization.

(A) A solid waste generation study shall be representative of all residential, commercial, industrial and other sources of waste generation in the jurisdiction. It shall also be representative of all solid waste source reduction, recycling, composting, transformation and disposal activities and facilities in the jurisdiction or used by the jurisdiction and its residents and businesses.

(i) Identification of Solid Waste Sources, Categories and Types. The solid waste generation study shall identify all significant sources of solid waste generated by a jurisdiction, identify all solid waste diversion programs and activities in a jurisdiction, all solid waste diversion facilities used by a jurisdiction which are either located in that jurisdiction or used by that jurisdiction, and identify all permitted solid waste transformation and disposal facilities used by a jurisdiction. The solid waste generation study shall identify solid wastes generated, diverted and disposed by volume and/or weight, according to the requirements of Section 18722(f) of this Article, and by waste category and waste type from the following sources of generation within the jurisdiction:

(A) Residential

(B) Commercial
(C) Industrial
(D) Other sources

The source of waste generation listed in (D) above and titled "other sources" may be used by a jurisdiction to identify sources of solid waste generation which it determines are not categorized as residential, commercial, or industrial sources of waste generation. Some examples of "other sources" of solid waste generators are: state and national parks and recreation areas, and self-haul vehicles.

(1) Sampling Period. Solid waste diversion and disposal characterizations shall demonstrate the composition and quantity of solid wastes diverted and disposed by the jurisdiction during a continuous twelve month period subsequent to 1984, pursuant to the requirements set forth in Sections 18722(a) and (b) of this Article. Data collection is not required for each day of the sampling period.

(2) Seasonal Variations. A solid waste generation study shall quantify seasonal variations in solid waste generation.

(A) For a jurisdiction which uses a quantitative field analysis for the initial solid waste generation study prepared for the SRR Element, only one sampling period (e.g., one week) is required for each of the seasons identified by a jurisdiction that occur within the six-month sampling period chosen by a jurisdiction. Only that amount of waste which enables a jurisdiction to meet the requirements of Section 41780(a)(1) of the Public Resources Code needs to be sampled by a jurisdiction. A jurisdiction may use existing data from its own jurisdiction or from a similar jurisdiction, as defined in Section 18724(c) of this Article, to determine the seasonal variation in the quantities and composition of solid wastes, and to determine the seasonal ratios of solid wastes generated, diverted and disposed, if the jurisdiction cannot obtain such data during its six-month sampling period.

(B) In subsequent solid waste generation studies prepared for revisions of SRR Elements, the data for a quantitative field analysis shall be collected with a frequency sufficient to sample the solid waste gemerated during all seasons identified by the jurisdiction, and in the amount needed to satisfy the requirements of Section 41780 of the Public Resources Code.

(C) For all solid waste generation studies, data collection is not required for each day of the seasons identified. In each season identified by a jurisdiction, the frequency of sampling shall be sufficient to provide a representative characterization of solid wastes generated, diverted, and disposed in the amounts needed to satisfy the requirements of section 41780 of the Public Resources Code. In subsequent solid waste generation studies, the frequency of sampling shall be statistically representative of the seasons sampled.

(3) Marine Wastes. A jurisdiction shall, in its solid waste generation study, identify all marine wastes generated in the jurisdiction and assign them to the waste categories and waste types listed in (j) of this section, or shall demonstrate that marine wastes generated within the jurisdiction have been accounted for within the commercial sources of solid waste generation.

(j) Solid Waste Categories and Types. A solid waste generation study shall identify solid waste generation, within a jurisdiction, by volume and weight, in accordance with the requirements of (f) of this section. A solid waste generation study shall identify solid waste generation within a jurisdiction by the following waste categories denoted by numerals 1 through 8, and the waste types which are identified by letter within each waste category:

(1) Paper:
(A) corrugated containers and brown paper bags
(B) mixed paper

(C) newspaper
(D) high grade ledger paper
(E) other paper

(2) Plastics:
(A) high-density polyethylene (HDPE) containers
(B) polyethylene terephthalate (PET) containers
(C) film plastics
(D) other plastics

(3) Glass:
(A) refillable glass beverage containers
(B) California Redemption Value glass
(C) other recyclable glass
(D) other non-recyclable glass

(4) Metals:
(A) aluminum cans
(B) bi-metal containers
(C) ferrous metals and tin cans
(D) non-ferrous metals including aluminum scrap
(E) white goods
(F) other metals

(5) Yard Waste: including leaves, grass, and prunings

(6) Other Organics:
(A) food waste
(B) tires and rubber products
(C) wood wastes
(D) agricultural crop residues
(E) manure
(F) textiles and leather
(G) other miscellaneous organics

(7) Other Wastes:

(A) inert solids, including rock, concrete, brick, sand, soil, fines, asphalt, sheetrock
(B) household hazardous waste materials and discarded household hazardous waste material containers

(8) Special Wastes:
(A) ash
(B) sewage sludge
(C) industrial sludge
(D) asbestos
(E) auto shredder waste
(F) auto bodies
(G) other special wastes

A jurisdiction may add additional waste types to this list, but only if the quantities of these additional waste types are not duplicates of the reported quantities of the waste types given in the list above.

(k) Composite Solid Wastes. A jurisdiction shall, in the case of a composite solid waste material which is readily separable into individual components, estimate in a solid waste generation study the separate

percent contribution, by volume or weight, of each identifiable and separable waste category and waste type in the composite solid waste material.

(l) Sampling Methodologies. Each jurisdiction shall use one or more of the methodologies listed in (1) through (4) of this subsection, to characterize the waste categories, waste types and quantities of the solid wastes generated within the jurisdiction and diverted or disposed in solid waste landfills or transformation facilities, using the waste categories and waste types given in Sections 18722(l) and (j) of this Article.

(1) Quantitative Field Analysis. The quantitative field analysis methodology shall be conducted using data which is collected in the field either from the sources of generation, from refuse collection vehicles or solid waste transfer vehicles; solid waste source reduction, recycling, and composting programs and facilities; and/or permitted solid waste transformation and disposal facilities.

For the purposes of this section, quantitative field analysis consists of two steps: (1) the physical separation and sorting of residential, commercial, industrial or other solid wastes, and/or the visual survey of the composition of the solid wastes contained in self-haul vehicles, industrial solid wastes contained in debris boxes or other industrial solid waste containers, and (2) the physical measurement or accurate estimation and recording of the weight and/or volume of the solid wastes observed when performing step (1).

(2) Materials Flow Methodology. A materials flow methodology is one in which a jurisdiction estimates, using data on the quantities of specific commodities sold in the jurisdiction's marketplace, the quantity of solid wastes generated as a result of sales of those commodities. With this methodology, adjustments are to be made for:

(a) import and export of commodities to and from a jurisdiction,
(b) commodity lifetime, and
(c) other variables identified by a jurisdiction.

(3) Jurisdiction-Specific Data. This methodology is one in which a jurisdiction uses existing published data to estimate the amounts of solid wastes specific to its jurisdiction, e.g., data on demolition and construction wastes, sludges, automobile bodies, nonhazardous industrial wastes, incinerator residues, and other solid wastes which cannot be easily sampled or estimated by another methodology allowed by this section.

(3) Existing Data from Comparable Jurisdictions. The comparable jurisdiction methodology is one by
which the jurisdiction analyzes solid waste generated in the jurisdiction by using existing solid waste composition data from another jurisdiction or jurisdictions in California, except as allowed in the following paragraphs of this subsection.

The use of out-of-state waste composition data is acceptable, provided that the jurisdiction submits with its solid waste generation study a statement of justification which satisfies its burden of proof of demonstrating the following:

1. The out-of-state data must be comparable to data available within California, and satisfy the requirements of subparagraphs A), B), and C) of this section;

2. The statutory and regulatory framework of the state from which the data is derived must be consistent with the California Integrated Waste Management Act of 1989, as amended, and its attendant regulations, such that it is evident that the framework has not significantly impacted the relative composition of the solid wastes disposed and diverted in that state.

3. As a part of demonstrating the data's comparability and legal consistency, a jurisdiction shall submit a complete copy of the following, at the time the jurisdiction submits its SRR Element for the Board's consideration:

(i) The waste characterization study and composition data it is using, and
(ii) The solid waste statutory and regulatory framework of the state from which the study and data originated.

For the purposes of this section, out-of-state data refers only to data obtained from other states of the United States.

Except for the initial solid waste generation study, and as allowed by section 18724(c) of this Article, data from another jurisdiction may be used to characterize the composition of solid waste generated only if all of the following criteria are met:

(A) the jurisdiction's population is within plus or minus 10% of that of the jurisdiction conducting the solid waste generation study; and

(B) the jurisdiction's total residential solid waste tonnage disposed is within plus or minus 10% of the total residential tonnage disposed by the jurisdiction conducting the solid waste generation study, or the jurisdiction's number of residential dwelling units is within plus or minus 10% of the number of residential units of the jurisdiction conducting the solid waste generation study; and

(C) the jurisdiction's total commercial solid waste tonnage disposed is within plus or minus 10% of the total commercial tonnage disposed by the jurisdiction conducting the solid waste generation study, or the jurisdiction's number of commercial units is within plus or minus 10% of the number of commercial units of the jurisdiction conducting the solid waste generation study.

(m) Solid Wastes Countable Towards Diversion.
For purposes of determining the quantity and types of solid wastes diverted, only those solid wastes which are normally disposed of at permitted solid waste landfills or permitted solid waste transformation facilities, and which are allowed to be counted toward the statutory diversion mandates pursuant to Sections 41781(a) and (b) of the Public Resources Code, as amended shall be included.

(n) Unacceptability of Double and Multiple Counting. A jurisdiction shall not double count or multiple count solid wastes that are diverted from disposal by recycling, composting and source reduction programs and facilities.

(o) Accuracy of Data. A jurisdiction shall, in compiling necessary data on the quantities and composition of solid wastes generated, diverted and disposed, develop a system of reporting procedures which will, as accurately as possible, quantify data reported from local governments, special districts, solid waste haulers, solid waste facility operators, scrap dealers, recycling facilities, recycling programs, and source reduction programs, for the purposes of the preparation of the SRRE, the Household Hazardous Waste Element, and the Countywide Siting Element. This system of reporting shall be separately outlined in the Solid Waste Generation Study when it is submitted to the Board.

Section 18724. Additional Requirements and Guidelines for the initial Solid Waste Generation Study.

In addition to the general requirements in Section 18722 of this Article, the following requirements pertain to a jurisdiction's preparation of the initial solid waste generation study for the initial SRR Element.

(a) Initial Solid Waste Generation Study Submission Dates.

Each city, which is not a city and county, shall submit the initial solid waste generation study, as a part of its SRR Element, to the county in which it is located by July 1, 1991, except as provided by

Section 41000 (b) of the Public Resources Code. Each county, and city and county, shall complete the initial solid waste generation study, as a part of its SRR Element, by July 1, 1991, except as provided by section 41000(b) of the Public Resources Code.

(b) Regional and Joint Solid Waste Generation Studies.

In addition to the methodologies given in Section 18722(l) of this Article, for the initial solid waste generation study.

A jurisdiction may use data collected on an aggregate basis for a joint or regional study of which a jurisdiction is a part. For the purposes of this section, data collected on an aggregate basis are data which are collected at solid waste facilities and recycling facilities which may not be readily disaggregated to a level in which an individual jurisdiction's solid waste generators, waste categories and/or waste types can be identified.

The aggregate data shall be disaggregated on a proportional basis, relative to the applicable demographic, economic, and residential, commercial and industrial characteristics of each jurisdiction participating in the regional or joint study. The initial solid waste generation study shall outline and describe how the proportional allocations of solid waste generated, diverted and disposed were determined and applied to the preparation of the solid waste generation study.

(c) Use of Pre-existing Solid Waste Generation Studies and Data. In addition to the methods given in section 18722(l) of this Article, for the initial solid waste generation study, a jurisdiction may use pre-existing solid waste generation studies or data on solid waste composition that have been prepared, subsequent to 1984, by the Board and/or by jurisdictions in California or out-of-state which have similar demographic (e.g., dwelling unit size, family size), and economic (e.g., income, employment), or solid waste (e.g., waste composition, relative proportions of solid waste generators) characteristics.

The use of out-of-state waste composition data is acceptable, provided that the jurisdiction submits with its solid waste generation study a statement of justification which satisfies its burden of proof by demonstrating the following:

(1) the out-of-state data must be comparable to data available within California, and satisfy the requirements of subsection (c) of this section; and

(2) the statutory and regulatory framework of the state from which the data is derived must be consistent with the California Integrated Waste Management Act of 1989, as amended, and its attendant regulations, such that it is evident that the framework has not significantly impacted the relative composition of the solid wastes disposed and diverted in that state.

As a part of demonstrating the data's comparability and legal consistency, a jurisdiction shall submit a complete copy of the following, at the time the jurisdiction submits its SRR Element for the Board's consideration:

(i) the waste characterization study and composition data it is using, and
(ii) the solid waste statutory and regulatory framework of the state from which the study and data originated.

For the purposes of this section, out-of-state data refers only to data obtained from other states of the United States.

A jurisdiction using solid waste generation studies or data from the Board and/or another jurisdiction with similar demographic, economic, and solid waste characteristics shall list and describe in its solid waste generation study all the

major characteristics which are similar between the two jurisdictions relative to the study.

(d) Measuring Solid Waste Quantity for Diversion Mandates.

If a jurisdiction chooses to count specific waste types towards its statutory diversion mandates, a jurisdiction shall identify those waste types in the initial solid waste generation study.

(e) Sampling Period - Field Study and Data Projection.

If a quantitative field analysis and/or materials flow methodology, as described in Section 18722(l) of this Article, are used, data for the initial solid waste generation study shall be collected in the field during a continuous six month period subsequent to 1984 and prior to the adoption of the initial SRR Element by a jurisdiction. Based on the data collected during the six-month field study, a jurisdiction shall project the types and quantities of solid waste generated, diverted and disposed for the following six-month period. The field data and the projection, when combined, shall constitute the continuous twelve-month study required by section 18722(I)(1) of this Article.

(f) Sampling by Quantitative Field Analysis.

If a quantitative field analysis for the initial solid waste generation study is selected for use by a jurisdiction, the quantitative field analysis may be conducted using the sampling procedures outlined in Appendix 1, "General Guidelines for Sampling When Performing a Quantitative Field Analysis for a Solid Waste Generation Study" (11/90).

(g) Aggregate Data.

In the preparation of the initial solid waste generation study, jurisdictions jointly developing or collecting aggregate data on a county or regional basis shall use only that data related to the quantities of solid waste generated within that region, not data on quantities of solid waste generated within other regions.

Section 18726. Solid Waste Generation Studies for revised SRR Elements.

In addition to the general requirements in section 18722 of this Article, the following requirements pertain to a jurisdiction's preparation of solid waste generation studies.

(a) Individual Jurisdiction Responsibility.

For all revisions of an SRR Element in which solid waste generation studies are conducted jointly by two or more jurisdictions, each participating jurisdiction shall be responsible for specifically measuring and identifying, in its SRR Element, the estimated quantity of solid waste generated within its jurisdiction which is disposed or diverted from disposal by source reduction, recycling or composting activities.

(b) Identification of Solid Waste Sources, categories and types.

Solid Waste generation studies prepared for revisions of the SRR Element shall identify the quantities of solid waste generated the jurisdiction, by source, by waste category and waste type as listed in sections 18722(i) and
(j) of this Article. Data for each Solid Waste generation study submitted to the Board as a part of a revised SRR Element pursuant to revisions required by Article 7 of this Chapter shall have been collected during a continuous twelve month period:

(1) commencing no more than three years prior to the next Board submittal date for the SRR Element as required by Article 7 of this Chapter.

(c) Sampling by Quantitative Field Analysis.

The quantitative field analysis for all Solid Waste generation studies for revised SRR Elements shall be conducted using the sampling procedures outlined in Appendix 1, "General Guidelines for Sampling When Performing a Quantitative Field Analysis for a Solid Waste Generation Study" (11/90), unless otherwise authorized by the Board.

(d) Requirement for Statistical Representation.

Solid Waste generation studies for revised SRR Elements shall be statistically representative of the composition and quantity of solid waste generated, diverted and disposed by the jurisdiction. Statistical representation shall be established by use of the Guidelines given in Appendix 1 of this Article.

(e) Partial Solid Waste Generation Studies.

If, upon review of the annual report submitted by a jurisdiction in compliance with Section 41821 of the Public Resources Code, the Board finds that the lack of accurate and/or sufficient information on solid waste quantities and solid waste composition has contributed to the inability of a jurisdiction to meet the goals and objectives cited in its adopted SRR Element, and/or to meet the statutory diversion mandates given in Section 41780 of the Public Resources Code, the Board may require a jurisdiction to prepare a partial solid waste generation study focused on particular sources of generation, and/or particular waste categories and waste types.

Article 6.2. Source Reduction and Recycling Elements

Section 18730. Scope.

(a) The Source Reduction and Recycling Element (SRRE) shall specify the means by which each jurisdiction required to prepare and implement a SRRE shall achieve the diversion mandates required by Public Resources Code section 41780 and 41780.1.

(b) The SRRE shall include items identified in Chapter 9, Article 6.1, sections 18722 through 18726, and sections 18731 through 18748 of this Article, as applicable.

(c) Unless otherwise specified, this Article pertains to initial and subsequent SRREs.

(d) For the purpose of this Article, a jurisdiction is a city, county, city and county or a regional agency.

(e) For the purpose of this Article, programs which may be considered as funded or operated by a jurisdiction or local governing body are identified in Public Resources Code section 41781.2(b)(1).

Section 18731. Goals and Objectives.

The SRRE shall include statements which define the goals and objectives for the short-term and medium-term planning periods.

(a) SRRE goals shall be consistent with the mandates of section 40051 of the Public Resources Code.

(b) SRRE objectives shall identify the amount of solid waste which the jurisdiction plans to divert from disposal at facilities to comply with the diversion requirements of Public Resource Code Sections 41780 and 41780.1 through each of the component programs described in sections 18733 through 18748 of this Article.

(c) SRRE objectives shall specify the time frame for achievement of each objective.

Section 18732. Solid Waste Generation Analysis.

Each jurisdiction preparing a SRRE shall prepare a solid waste generation analysis based upon the information developed in Article 6.1 of this Chapter. The analysis shall include, but not be limited to, the following:

(a) For the initial SRRE, include a list, by specific waste categories, as denoted in section 18722, of Article 6.1 of this Chapter, of the quantities of materials currently diverted from disposal, and the materials identified as being currently disposed according to the Waste Generation Study conducted by the jurisdiction.

(b) A list of the waste materials currently disposed in the jurisdiction which could potentially be diverted from disposal by use of the diversion programs described in sections 18733 through 18740, of this Article.

(c) A list of the waste materials currently disposed in the jurisdiction which cannot be diverted from disposal by diversion programs including, but not limited to, those described in sections 18733 through 18740, of this Article and a discussion of why these waste materials cannot be diverted from disposal.

Section 18733. Model Component Format.

(a) The model component format, described in sections 18733.1 through 18733.6 of this Article, shall be used in the preparation of each of the following individual components of the SRRE:

(1) Source Reduction Component
(2) Recycling Component

(3) Composting Component
(4) Special Waste Component

(b) Additional requirements contained in sections 18734 through 18737.2 of this Article, shall be included in the preparation of the components, listed in section 18733(a) of this Article, in accordance with the model component format.

Section 18733.1. Component Objectives.

(a) Each component shall state the specific objectives to be accomplished during the short-term and medium-term planning periods. The initial SRRE component objectives shall be based upon the results of the Solid Waste Generation Analysis required by section 18732 of this Article and other local considerations which may be necessary to accomplish integrated waste management.

(b) For the initial SRRE, each jurisdiction shall identify specific waste categories or waste types, as found in the Solid Waste Generation Study conducted pursuant to section 18722, of Article 6.1 of this Chapter, as priorities for waste diversion based on analysis of solid waste generation in terms of criteria which may include, but are not limited to, the following:

(1) volume of the solid waste;
(2) weight of the solid waste;
(3) hazard of the solid waste; and
(4) material, products or packages, contributing to the waste category or waste type, that are made of non-renewable resources.

Section 18733.2. Existing Conditions Description.

(a) As applicable, each component, listed in section 18733(a) of this Article, shall include a description of the existing diversion alternatives for each component program in the jurisdiction. The description shall include, but not be limited to, the following:

(1) a brief description of each existing diversion alternative implemented in the jurisdiction; and

(2) the quantity of waste diverted, listed by waste category and waste type where applicable as follows:

(A) for the initial SRRE identify the quantity of waste diverted for each existing diversion alternative. Waste quantities shall be specified by volume, expressed in cubic yards, or by weight, expressed in tons;

(B) for a subsequent SRRE, quantify each existing diversion alternative which involves recycling or composting programs that are operated or funded by a jurisdiction. Waste quantities shall be specified by, expressed in tons or volume, expressed in cubic yards.

(3) an identification and description of the existing diversion alternatives within the jurisdiction that will be decreased in scope, phased out or closed during the short-term and medium-term planning periods. The description shall include a discussion of the effects of such closure on existing solid waste management activities within the jurisdiction and its impact on the attainment of the solid waste diversion mandates specified in sections 41780 and 41780.1, Public Resources Code.

(b) The information provided in this section shall be used to:

(1) account for existing diversion amounts when calculating baseyear solid waste generation rates in the initial SRRE.

Section 18733.3. Evaluation of Alternatives.

Each component shall include an evaluation of diversion alternatives which have been considered for local implementation for the purpose of achieving the objectives required in section 18733.1, of this Article.

(a) Each alternative considered shall be evaluated in terms of the following criteria and any other local considerations:

(1) effectiveness in reducing either solid waste volume, weight, percentage in weight or its volumetric equivalent;

(2) hazard created by the alternative considered;

(3) ability to accommodate changing economic, technological, and social conditions;

(4) consequences of the diversion alternative on the characterized waste, such as shifting solid waste generation from one type of solid waste to another;

(5) whether it can be implemented in the short-term and medium-term planning periods; and

(6) the need for expanding existing facilities or building new facilities to support implementation of the alternative.

(b) In addition, the evaluation shall include, but not be limited to, the following:

(1) a discussion of the consistency of each alternative with applicable local policies, plans, and ordinances based upon local conditions;

(2) a discussion of any institutional barriers to local implementation of each alternative;

(3) an estimate of the costs related to the implementation of each alternative being evaluated for the short-term and medium-term planning periods; and

(4) a discussion of the availability of local, regional, state, national, and international end-uses for the materials which would be diverted through implementation of each alternative being considered.

Section 18733.4. Selection of Program.

(a) Each component shall identify and describe the diversion alternatives selected, including existing diversion alternatives, expansions of existing diversion alternatives, and new diversion alternatives, which will be implemented to meet the objectives of the component and meet the solid waste diversion requirements specified in Public Resources Code, sections 41780 and 41780.1. This selection shall be based upon the evaluations conducted pursuant to section 18733.3 of this Article. The program description shall include, but not be limited to, the following:

(1) a discussion of each diversion alternative selected for the program identifying why the alternative was selected for implementation. For the initial SRRE this discussion shall be based upon the data compiled in the solid waste generation study conducted pursuant to Article 6.1, of this Chapter, information contained in the solid waste generation analysis required by section 18732 of this Article; and the evaluation conducted pursuant to section 18733.3 of this Article.

(2) an estimate of the anticipated quantities of solid wastes to be diverted from solid waste disposal, by diversion program and waste type, for the short-term and medium-term planning periods. Solid waste quantities shall be estimated either by volume, expressed in cubic yards, or by weight, expressed in tons. Each component shall state the anticipated percentage of contribution of the

selected program towards the diversion mandates required by section 41780 and 41780.1 of the Public Resources Code;

(3) as applicable to the component, a listing of the anticipated local, regional, state, national, and/or international end-uses for diverted materials based upon the evaluation of the diversion alternative required by section 18733.3(b)(4) of this Article;

(4) as applicable to the component, a description of the proposed methods for handling and disposal which may be necessary to implement the selected program; and

(5) a description of any facilities to be utilized for the implementation of the program which section 18733.3 of this Article has shown must be expanded or built to support implementation of the selected program.

(b) Each diversion alternative which involves waste type "sludge" shall, in addition to the criteria set forth in subsections (a) (1) and (a) (2) of this section, be subject to a finding by the Board as described in Article 7.0 section 18775.2.

Section 18733.5. Program Implementation.

Each component shall contain a program implementation description which includes, but is not limited to, the following:

(a) identification of government agencies and divisions thereof, organizations, and/or persons responsible for implementation of the selected program;

(b) identification of the tasks necessary to implement the selected program; and

(c) identification of a short-term and medium-term planning period implementation schedule addressing each task identified in (b) of this section.

Section 18733.6. Monitoring and Evaluation.

(a) Each jurisdiction shall use one or more of the following methods to monitor and evaluate diversion programs being implemented:

(1) for the initial SRRE, a Waste Generation Study consistent with the waste generation study prepared under section 18722, of Article 6.1 of this Chapter;

(2) targeted solid waste characterization studies involving recycling, composting, transformation, and solid waste landfill facilities to measure changes in the volume, or weight of specific materials;

(3) an assessment of any changes in the design, production, distribution, sale, or use of selected products and packages which affect solid waste generation; or

(4) another method for which prior written approval has been given by the Board.

(b) Each jurisdiction shall provide the following information based upon the specific monitoring and evaluation methods selected for each recycling and composting program that is operated or funded by a jurisdiction:

(1) written criteria for evaluating the program's effectiveness;

(2) identification of agencies or divisions thereof, organizations, or persons responsible for the program's monitoring, evaluation, and reporting;

(3) identification of measures to be implemented if monitoring shows a shortfall in the attainment of solid waste diversion objectives of the component or a shortfall in the attainment of the diversion mandates specified in Public Resources Code, section 41780 and 41780.1. Such measures may include, but are not limited to, provisions for:

(A) increasing the frequency of program monitoring and review, or,

(B) modification of the objectives or diversion alternatives adopted in each component program.

(c) Each recycling or composting component program that is operated or funded by a jurisdiction shall contain an explanation of how the program is to be monitored and evaluated during its implementation. A jurisdiction shall identify the methods to quantify and monitor achievement of the objectives, including but not limited to, diversion from solid waste landfills and transformation facilities and reduction of waste hazards. Actual solid waste diversion shall be quantified in cubic yards, or in tons, and as a percentage of the total solid waste generation of the jurisdiction.

Section 18734. Source Reduction Component Specific Requirements.
The Source Reduction Component shall include the requirements contained in sections 18733.1 through 18734.3 of this Article.

Section 18734.1. Source Reduction Component Objectives.

(a) Each jurisdiction shall examine and select source reduction program objectives which meet the goal of minimizing the quantity of solid waste disposed, including, but not limited to, the following:

(1) reducing the use of non-recyclable materials;

(2) replacing disposable materials and products with reusable materials and products;

(3) reducing packaging;

(4) reducing the amount of yard wastes generated;

(5) purchasing repairable products; and

(6) increasing the efficiency of the use of paper, cardboard, glass, metal, and other materials by reducing wastes from non-residential generators' production operations, processes, and equipment and considering durability, reusability, and recyclability as product selection criteria.

(b) Each jurisdiction shall identify specific waste types (materials, products, and packaging) to be targeted for the source reduction objectives, based upon criteria, which include, but are not limited to, the following:

(1) the potential to extend the useful life of affected materials, products, or packaging; and

(2) whether the waste type has limited recyclability.

Section 18734.2. Source Reduction Component Existing Conditions Description.

(a) The description of existing conditions shall identify the source reduction activities currently being performed by public and private entities including, but not limited to governmental, commercial, and industrial entities;

(b) For the initial SRRE, quantification of current source reductions achieved through existing programs within the jurisdiction shall meet the following criteria:

(1) the methodology, assumptions, and results shall be described, documented, and verified; and

(2) the jurisdiction shall use the best readily available and applicable data, which may include direct observations and measurements of source reduction and the results of monitoring programs similar to those identified in section 18733.6 of this Article.

Section 18734.3. Evaluation of Source Reduction Program Alternatives.

Each jurisdiction shall consider source reduction program alternatives including, but not limited to, the following:

(a) Rate structure modifications, which may include, but are not limited to:

(1) local waste disposal fee modifications;

(2) quantity-based local user fees, which may include, but are not limited to, variable can rates for garbage collection services, such as fees based on the number of containers set out for collection;

(b) Creation of other economic incentives, which may include, but are not limited to:

(1) loans, grants, and loan guarantees;

(2) deposits, refunds, and rebates; and

(3) reduced business license fees;

(c) Technical assistance or instructional and promotional alternatives, which may include, but are not limited to:

(1) waste evaluations;

(2) the establishment of compost programs which assist generators to compost at the site of generation;

(3) technical assistance to industry and consumer organizations, and to source reduction businesses;

(4) educational efforts, such as consumer awareness programs, school curricula development, seminars, and public forums;

(5) awards and other types of public recognition for source reduction activities; and

(6) non-procurement source reduction programs, such as education of employees, office changes to increase the use of scrap paper, increased use of electronic mail, and increased double-sided copying.

(d) Regulatory programs, which may include, but are not limited to:

(1) local adoption of ordinances that specify that one or more of the following criteria be considered in the procurement selection of products and packaging by the jurisdiction:

(A) durability
(B) recyclability
(C) reusability
(D) recycled material content

(2) local establishment of incentives and disincentives to land-use development that promote source reduction;

(3) locally established requirements of waste reduction planning and reporting by waste generators or manufacturers;

(4) local adoption of bans on products and packaging to the extent the following can be demonstrated:

(A) the ban will result in reduction in waste at the source, rather than substitution by another product or package of equivalent or greater volume; and

(B) the ban will result in a net environmental benefit.

Section 18735. Recycling Component Specific Requirements.

The Recycling Component shall include the requirements contained in sections 18733.1 through 18733.6 and 18735.1 through 18735.5 of this Article.

Section 18735.1. Recycling Component Objectives.

A statement of market development objectives to be achieved in the short-term and medium-term planning periods shall be included in the goals and objectives section of the recycling component, as required by sections 41074 and 41374 of the Public Resources Code.

Section 18735.2. Recycling Component Program Existing Conditions Description.

The description of the existing recycling program shall include, but not be limited to, a description of existing private and public recycling activities, local market development activities, including any government procurement programs, economic development activities, consumer incentives, and education programs conducted within the jurisdiction.

Section 18735.3. Evaluation of Recycling Program Alternatives.

Each jurisdiction shall analyze the recycling diversion alternatives affecting residential, commercial, and industrial wastes. The analysis shall take into account existing recycling programs and their possible expansion in addition to the areas of concern specified in section 18733.3 of this Article.

(a) The alternatives shall include, but not be limited to, the following methods for accomplishing separation of the recyclable materials from the waste stream:

(1) separation of recyclable materials at the source of generation, including curbside and mobile collection systems;

(2) drop-off recycling centers;

(3) buy-back recycling centers;

(4) manual material recovery operations;

(5) mechanized material recovery operations that produce a product which has a market; and

(6) salvage at solid waste facilities.

(b) The jurisdiction shall consider changing zoning and building code practices to encourage recycling of solid wastes, such as, rezoning to allow siting of a drop-off recycling center in residential neighborhoods or revising building codes to require adequate space be allotted in new construction for interim storage of source-separated materials.

(c) The jurisdiction shall consider changing existing rate structures to encourage recycling of solid wastes.

(d) The jurisdiction shall consider the methods which it will use to increase the markets for recycled materials, including, but not limited to, changing governmental procurement programs to promote market development by giving purchase preferences to recycled products or otherwise specifying their use.

(e) The jurisdiction shall encourage handling methods which preserve the integrity of recovered materials so that they remain usable raw materials for manufacturers of recycled content products. For this purpose, the jurisdiction shall consider the extent to which separation of recyclable materials from waste can be performed as close to the point of generation as possible.

Section 18735.4. Selection of Recycling Program.

(a) The Recycling Component shall identify the end markets or end users which will be secured during the short-term period, for the materials collected. In the event that such markets cannot be identified, the component shall describe the methods by which the jurisdiction will secure the necessary markets.

(1) The identification of markets may be described in general terms.

(2) Planned development of markets at manufacturing facilities in the jurisdiction shall also be described.

(b) The Recycling Component shall describe the measures to be taken if un-economical market conditions or other unfavorable conditions occur which are beyond the jurisdiction's control and which would prevent the jurisdiction from satisfying the requirements of section 41780 and 41780.1 of the Public Resource Code.

Section 18735.5. Recycling Program Implementation.

The recycling program shall denote actions planned to deter unauthorized removal of recyclable materials which would adversely affect the recycling program's effectiveness.

Section 18736. Composting Component Specific Requirements.

The Composting Component shall include the requirements contained in sections 18733.1 through 18733.6 and 18736.1 through 18736.4 of this Article.

Section 18736.1 Composting Component Objectives.

A statement of market development objectives to be achieved in the short-term and medium-term planning periods shall be provided in the Composting Component, as required by sections 41204 and 41404 of the Public Resources Code.

Section 18736.2. Composting Component Program Existing Conditions Description.

The description of the existing composting program shall include, but not be limited to, a description of existing local market development activities, including any government procurement programs, economic development activities, or consumer incentives conducted within the jurisdiction.

Section 18736.3. Evaluation of Composting Program Alternatives.

(a) Composting program alternatives that qualify toward achievement of the diversion mandates specified in sections 41780 and 41780.1 of the Public Resources Code shall include only those alternatives whose products result from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream or separated at a centralized waste processing facility.

(b) Composting alternatives do not include composting of solid waste at the site of generation by the generator, since such an alternative constitutes a source reduction method.

Section 18736.4. Selection of Composting Program.

(a) The Composting Component shall identify the end markets or end use which will be secured during the short-term period for the materials composted, using the selected program. In the event that such markets cannot be firmly identified, the component shall describe the methods by which the jurisdiction will secure the necessary markets. The identification of markets may be described in general terms. Planned development of markets at manufacturing facilities in the jurisdiction shall also be described.

(b) The Composting Component shall describe the measures to be taken if un-economical market conditions occur beyond the jurisdiction's control, which would prevent the jurisdiction from satisfying the requirements of section 41780 and 41780.1 of the Public Resource Code.

Section 18737. Special Waste Component.

The Special Waste Component shall include the requirements contained in sections 18733.1 through 18733.6 and 18737.1 and 18737.2 of this Article.

Section 18737.1. Special Waste Component Objectives.

For the initial SRRE each jurisdiction shall examine and select Special Waste Component objectives based upon data generated in the Solid Waste Generation Study, conducted pursuant to section 18722, of Article 6.1 of this Chapter. The objectives shall include a plan to reduce the hazard potential of special wastes by waste type.

Section 18737.2. Special Waste Component Existing Conditions Description.

(a) The description of the existing special waste program shall include, but not be limited to, a description of existing solid waste facilities which are permitted to handle or dispose of special wastes. Where applicable, the description shall include a discussion of other regulatory agency requirements, permits, or other documents associated with the operation of these facilities.

> (1) regulatory agencies include, but are not limited to, regional water quality control boards, air quality management districts, and the Department of Toxics Substances Control.

(b) For the initial SRRE the jurisdiction shall provide a discussion on those special wastes identified in the Waste Generation Study conducted pursuant to section 18722, of Article 6.1 of this Chapter for which there is currently no permitted handling or disposal method within the jurisdiction.

Section 18740. Education and Public Information Component.

(a) Component objectives. The Education and Public Information Component shall include a statement of educational and informational objectives for the short-term and medium-term planning periods.

(b) Existing program description. The component shall include a description of all existing educational and public information programs and activities within the jurisdiction which promote source reduction, recycling, composting, and the safe handling and disposal of solid waste.

(c) Selection of program alternatives. For the initial SRRE the component shall incorporate data compiled in the solid waste generation study conducted pursuant to Article 6.1 and the solid waste generation analysis of section 18732 of this Article to identify solid waste generators that will be targeted in educational and public information programs.

(d) Program implementation. The component shall include a program implementation discussion which:

(1) identifies those agencies or divisions thereof, organizations, and/or persons responsible for implementation;

(2) identifies required implementation tasks;

(3) establishes short-term and medium-term implementation schedules for tasks;

(e) Monitoring and evaluation. For each component program which involves recycling or composting programs that are operated or funded by a jurisdiction, the component shall:

(1) identify the methods to be used to measure achievement of the education and public information objectives identified pursuant to section (a), above;

(2) establish written criteria by which to evaluate program effectiveness;

(3) identify agencies or divisions thereof, organizations, and/or persons responsible for program monitoring, evaluation, and reporting;

(4) identify measures to be implemented if monitoring performed pursuant to section 18733.6 (a) of this Article shows a shortfall in the attainment of the solid waste diversion objectives; and

(5) establish a program monitoring and reporting schedule.

Section 18744. Facility Capacity Component.

(a) For the initial SRRE the Solid Waste Facility Capacity Component shall identify and describe all existing permitted solid waste landfills and transformation facilities within the jurisdiction. This description shall contain the following:

(1) identification of the owner and operator of each permitted solid waste disposal facility;

(2) quantity and waste types of solid waste disposed;

(3) permitted site acreage;

(4) permitted capacity;

(5) current disposal fees; and
(6) for solid waste landfills, remaining facility capacity in cubic yards and years.

(b) The Solid Waste Facility Capacity Component shall include a solid waste disposal facility needs projection which estimates the additional disposal capacity, in cubic yards per year, needed to accommodate anticipated solid waste generation within the jurisdiction for a 15-year period commencing in 1991.

(1) The solid waste disposal facility capacity needs projection for the initial SRRE shall be calculated based upon the solid waste generation projection conducted in accordance with section 18722, of Article 6.1 of this Chapter.

(2) The disposal capacity needs projection for the 15 year period shall be calculated using the following equation:

ADDITIONAL CAPACITY
Year n = [(G + I) - (D + TC + LF + E)]Year n

where:

G = The amount of solid waste projected to be generated in the jurisdiction;

I = The amount of solid waste which is expected to be imported to the jurisdiction for disposal in permitted solid waste disposal facilities through interjurisdictional agreement(s) with other cities or counties, or through agreements with solid waste enterprises, as defined in section 40193 of the Public Resources Code.

D = The amount diverted through successful implementation of proposed source reduction, recycling, and composting programs.

TC = The amount of volume reduction occurring through available, permitted transformation facilities.

LF = The amount of permitted solid waste disposal capacity which is available for disposal in the jurisdiction, of solid waste generated in the jurisdiction.

E = The amount of solid waste generated in the jurisdiction which is exported to solid waste disposal facilities through interjurisdictional agreement(s) with other cities, counties or states, or through agreements with solid waste enterprises, as defined in section 40193 of the Public Resources Code.

n = each year of a 15 year period commencing in 1991. [iterative in one year increments]

(c) The Solid Waste Facility Capacity Component shall include discussions of:

(1) The solid waste disposal facilities within the jurisdiction which will be phased out or closed during the short-term and medium-term planning periods and the anticipated effect from such phase-out or closure on disposal capacity needs of the jurisdiction.

(2) Plans to establish new or expanded facilities for the short-term and medium-term planning periods and the projected additional capacity of each new or expanded facility.

(3) Plans to export waste to another jurisdiction for the short-term and medium-term planning periods and the projected additional capacity of proposed export agreements.

Section 18746. Funding Component.

(a) The Funding Component shall demonstrate that there is sufficient funding and allocation of resources for:

(1) program planning and development;

(2) implementation of programs in order to comply with the requirements of section 41780 and 41780.1 of the Public Resources Code.

(b) The Funding Component shall provide cost estimates for component programs scheduled for implementation in the short-term planning period.

(1) The Funding Component shall identify revenue sources sufficient to support the component programs.

(2) The Funding Component shall identify sources of contingency funding for component programs.

Section 18748. Integration Component.

(a) The Integration Component shall explain how the Source Reduction, Recycling, Composting, and Special Waste components combine to achieve the 25 and 50 percent mandates specified in Public Resources Code sections 41780 and 41780.1. The Integration component shall include, but is not limited to, the following:

(1) a description of the solid waste management practices which fulfill the legislative goals of promoting integrated solid waste management in the following order of priority:

(A) source reduction;

(B) recycling and composting; and

(C) environmentally safe transformation and environmentally safe land disposal of solid wastes;

(2) an explanation of how the jurisdiction has integrated the components to maximize the use of all feasible source reduction, recycling and composting options;

(3) an explanation of how the components jointly achieve the diversion mandates in section 41780 and 41780.1 of the Public Resources Code; and

(4) an explanation of how priorities between components were determined, and

(5) and explanation of whether the jurisdiction has been designated, or plans to apply for designation, as a California Integrated Waste Management Board Recycling Market Development Zone.

(b) An integrated schedule shall be submitted in the Integration Component which shall include the following:

(1) a calendar scheduling all implementation tasks for new and expanded programs, commencing after the effective date of the Integrated Waste Management Act of 1989 through the short-term planning period, as identified in the components specified in sections 18733(a) and 18740 of this Article. The schedule shall include a short descriptive title for each task, the entity implementing the task, the task start date and milestone dates, and a schedule for funding source availability.

(A) implementation tasks are those tasks in each component which satisfy the requirements of sections 18733.5(b) and 18740(d) of this Article.

(2) the schedule shall also show the anticipated date of achievement of the solid waste diversion mandates specified in sections 41780 and 41780.1, Public Resources Code.

Appendix C

1992 Waste Diversion Plan: Implementing a County-Wide Strategy

1999 Solid Waste Diversion Status Report
2000 Solid Waste Diversion Status Report
2001 Solid Waste Diversion Status Report
2002 Solid Waste Diversion Status Report
2004 Solid Waste Diversion Status Report
2006 Solid Waste Diversion Status Report

WASTE DIVERSION PLAN
FISCAL YEAR 1992-1993

IMPLEMENTING A COUNTY-WIDE STRATEGY

Prepared by

Kern County Waste Management Department

December 1992

with modifications requested by
Kern County Board of Supervisors
on December 15, 1992

INTRODUCTION

The current emphasis on waste diversion is a result of statewide concerns regarding:

1. Dwindling landfill capacity;
2. Potential environmental impacts of landfills; and
3. Perceived need for improved resource conservation.

Numerous waste diversion and landfill permitting and operating requirements have been developed through legislation. These requirements have significantly increased the cost of operating landfills everywhere.

The Integrated Waste Management Act of 1989 (aka AB939) mandates that each county and city in California achieve a 25% waste diversion goal by 1995 and 50% by the year 2000. Each jurisdiction was required to develop a plan (Source Reduction and Recycling Element) that describes programs for achieving these goals. Kern County has completed this plan and submitted it to the California Integrated Waste Management Board (CIWMB) for review. The eleven cities within Kern County have also completed their plans. Those plans are based upon an extensive, county-wide Waste Characterization Study and Analysis that identifies waste stream components and volume by source (residential, commercial and industrial).

CONTEXT

Attempts to develop and implement programs for diversion are complicated by several factors which are:

- High cost per ton for those diversion programs necessary for full compliance with the diversion goals.
- Wide range of proposals available for meeting the diversion goals.
- Presently, the cost for landfilling material is more economical than recycling.
- Markets for recycled material are not readily available in some regions of the county.
- Recent rule changes as to what materials will count toward diversion goals and what materials will not count.
- Recent change from a waste generated based diversion accounting method to a waste disposal based diversion accounting method for the purpose of determining whether diversion goals were achieved.

OVERALL DIVERSION GOALS

Given the complexity and costliness of extensive waste diversion, a clearly articulated set of diversion goals is necessary to guide County waste diversion planning efforts. These goals are:

1. Implement those programs first that make the most economic and public service sense.
2. Implement only those programs that will allow us to comply with the law in a prudent, phased, and cost-effective manner.
3. Maximize the cost-effective life of our existing facilities.
4. Implement all programs in a manner that maximizes customer satisfaction.

HIERARCHY OF DIVERSION PROGRAMS

Consistent with these overall goals, the basic diversion program hierarchy will be as follows:

First: Implement waste diversion strategies that are essentially "no cost." (i.e. Support existing voluntary, private sector recycling efforts.)

Second: Structure waste management fee schedules to support and stimulate additional, voluntary private sector "no cost" diversion alternatives. (The imposition of gate fees will, for example, create private incentives for additional diversion at no direct cost to the taxpaying public.)

Third: Conduct waste audits for large quantity generators in unincorporated areas to promote voluntary on-site reduction or recycling.

Fourth: Implement fundamental, low cost waste diversion strategies. (Educational programs that stimulate private recycling drop off programs, etc.)

Fifth: Implement hauler based diversion programs where appropriate and cost effective.

Sixth: Implement additional diversion programs as appropriate and cost effective.

Seventh: Encourage additional market development.

- enhance County procurement policy
- promote use of recycled inert materials in County road projects
- promote use of wood/green waste products in County parks and other facilities.
- encourage these same practices with other governmental agencies and the private sector within Kern County.

STRATEGY

To implement the goals outlined above in the most cost-effective manner possible, the County waste stream has been evaluated to determine how to get the largest diversion "bang for the buck." The following strategic approach has been identified:

Overall

- The County will work with the cities to implement waste diversion strategies that target the waste streams of significance in the region or sub-region.
- The County will joint venture with cities, the franchised haulers, and/or other entities to implement programs wherever practical.

The subsequent discussions are listed in order according to the volume of waste generated in the planning area. The planning area corresponds to the map shown on page 7.

Metropolitan Bakersfield - Planning Area 4

The County will cooperate with the City of Bakersfield in the expansion of their green waste/wood waste program. This expansion will take effect this fiscal year.

The County will cooperate with the City of Bakersfield, the franchise haulers in Zone 2, and/or other relevant entities to establish a Metro Bakersfield Waste Processing Center which can include a small volume transfer station, a composting operation, and a Materials Recovery Facility (MRF). This project is intended to be on-line within the next three to five years to position this region to meet the year 2000 goals. The County's involvement in this cooperative project will include primarily financial support and technical assistance, as well as planning and policy development.

Southeast Kern - Planning Area 5

This region is well on its way to meeting the 1995 goals with the existence of a MRF in Tehachapi. The County will work with the MRF operator to enhance its operations and efficiency by:

- Expanding the MRF to a Regional Transfer Station-Waste Processing Center and closing the Landfill to the public.
- Moving toward universal collection to enhance the cost-effectiveness of the operation and minimize the financial impact on the community.
- Explore opportunities for wood and green waste diversion, possibly through the existing waste processing center.

The cities in this region will be encouraged to participate with the County in this plan consistent with the diversion program hierarchy described above.

Northeast Kern - Planning Area 1

Indian Wells Valley

The Kern County Waste Management Department will cooperate with the City of Ridgecrest, requesting them to be the lead in establishing waste diversion programs. The County will provide technical support and participate in the planning and policy development.

Kern River Valley

The Kern County Waste Management Department will take the lead in the planning and policy development, and coordinate with the local haulers. If Kern River Valley's programs cannot be integrated with Indian Wells Valley's programs, the County will take the lead in establishing the necessary diversion activities in the area.

Northwest Kern - Planning Area 2

The County will cooperate with the Cities of Delano, McFarland, Shafter, and Wasco, requesting them to take the lead in establishing waste diversion programs. The County will provide limited technical support and coordinate with franchise haulers serving the unincorporated area. The County will meet with the cities to initiate dialogue on waste diversion options and encourage the cities to jointly fund a Recycling Coordinator for this region.

Planning Area 3: Southwest Kern

The County will cooperate with the Cities of Taft and Maricopa, the haulers, and/or other entities in implementing programs in this area. The County and City will attempt to jointly fund a Recycling Coordinator for this region.

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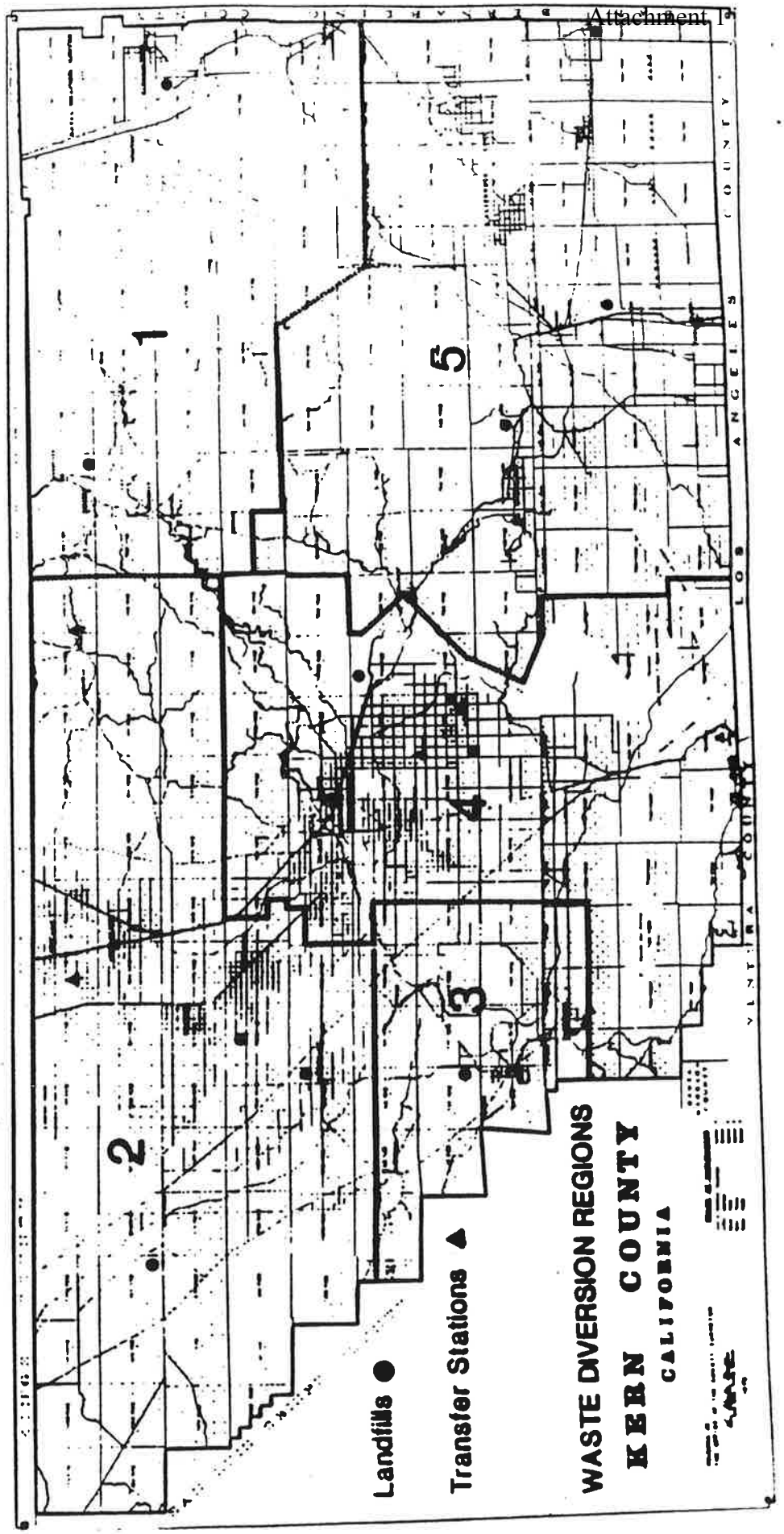
WASTE DIVERSION REGIONS
KERN COUNTY
CALIFORNIA
Landfills
Transfer Stations
1
2
3
4
5
LOS ANGELES COUNTY
VENTURA COUNTY

1999 SOLID WASTE DIVERSION STATUS REPORT

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April 1999

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1999 SOLID WASTE DIVERSION STATUS REPORT

Introduction

The County is within just a few percent of meeting the State mandated solid waste diversion goal of 50 percent by the year 2000. The Board of Supervisors has made a specific goal of the Director of the Waste Management Department to comply with this statutory requirement. Diversion actually exceeded 50 percent for the 1995 and 1996 calendar years. Unfortunately, diversion has fallen slightly behind disposal in the last couple of years. This report presents various options that are available to increase diversion. The report identifies the options the Department recommends and requests Board of Supervisors' decision on how to proceed.

Background

Assembly Bill 939
It has been almost ten years since the passage of Assembly Bill 939 enacted the Integrated Waste Management Act of 1989. The most widely known provision of this bill is the requirement for each jurisdiction to divert 25 percent of its waste stream from disposal by January 1, 1995, and to divert 50 percent of its waste stream by January 1, 2000. Other significant requirements of the bill related to waste diversion are the completion of a Waste Characterization Study and the preparation of a Source Reduction and Recycling Element. (Waste diversion is a term that encompasses any method of reducing the amount of waste disposed at landfills such as recycling, reuse, composting and reduction of the amount of waste generated.)

Waste Stream Composition
The County met the Waste Characterization Study requirement in 1991. A comprehensive and detailed breakdown of what materials made up the waste stream was developed and conducted by the County for all Kern County jurisdictions. The results of the study included how much waste each jurisdiction generated, diverted and disposed. This information was prorated to 1990 data to establish the official numbers for the "Base Year" which is the basis for determining compliance with the AB 939 diversion goals.

Source Reduction and Recycling Element
The County completed preparation of the Source Reduction and Recycling Element in 1991. (It is an "Element" of the larger Integrated Waste Management Plan which was also required by AB 939.) This document describes what programs and actions the County intends to implement in order to meet the diversion goals. Each city is required to prepare its own Recycling Element, although the County offered assistance to any city which made a request. The County's Source Reduction and Recycling Element was approved by the Board of Supervisors in 1991 and, although it was not approved by the California Integrated Waste Management Board (Waste Board) until 1996, the Department began implementation immediately.

The Department prepared a more succinct strategy plan in 1992 which the Board of Supervisors approved. The Waste Diversion Plan resolved, in essence, that the County would attain the AB 939 goals as cost-effectively as possible.

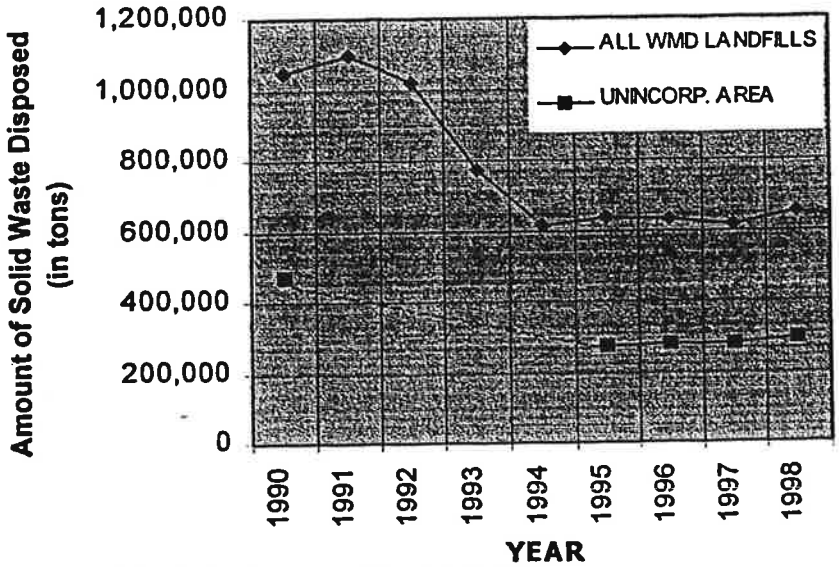
Disposal-Based Accounting

The methodology for measuring achievement of the diversion goals dictated in the original legislation was direct counting of disposal and diversion tonnages. Legislation was passed in 1993 that modified the methodology to "disposal-based." This means that tracking every ton of diversion is no longer required. The current method uses the "Base Year" generation as a total waste stream benchmark. To determine the percent diversion for any given year, a formula is applied to the "Base Year" to estimate the waste generation for the current year and the waste disposal for the current year is compared to this waste generation amount. The formula was derived by the Waste Board. An illustration that may clarify how the diversion percentage is determined is included as Attachment 1.

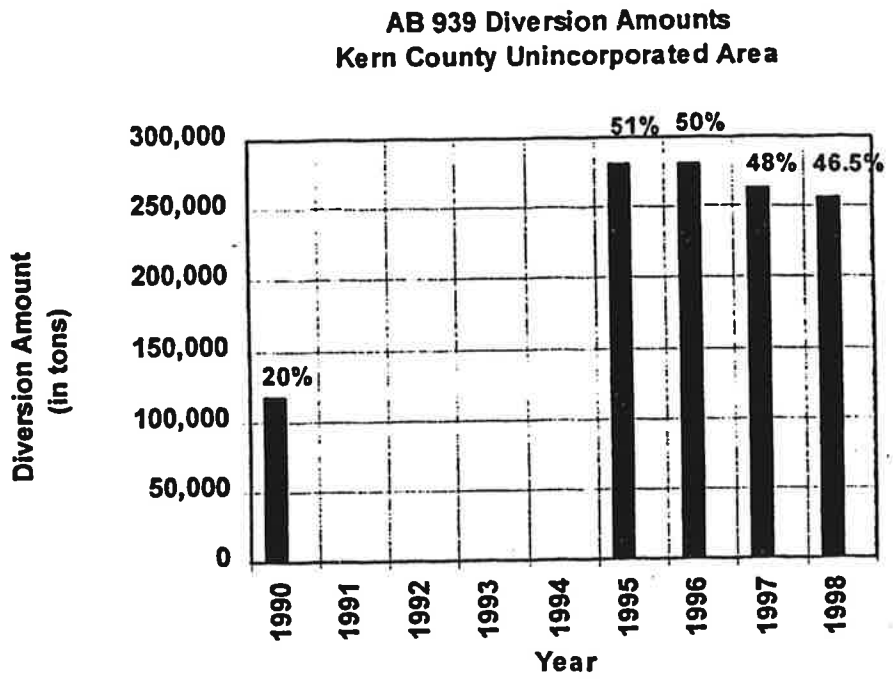
Disposal and Diversion History

Since 1989, the County has implemented or supported numerous waste diversion programs that are helping to achieve the AB 939 goals. A chronological list of the diversion programs implemented is included as Attachment 2. The program with the greatest impact on reducing landfill disposal has been the implementation of gate fees on non-residential waste in July 1993. The County successfully **met the 1995 goal with 51 percent diversion.** However, that percentage has slipped slightly every year since then. Charts for disposal and diversion history are presented here for reference.

Kern County Waste Disposal History



Note: 98 data for the unincorporated County is estimated



Present Situation

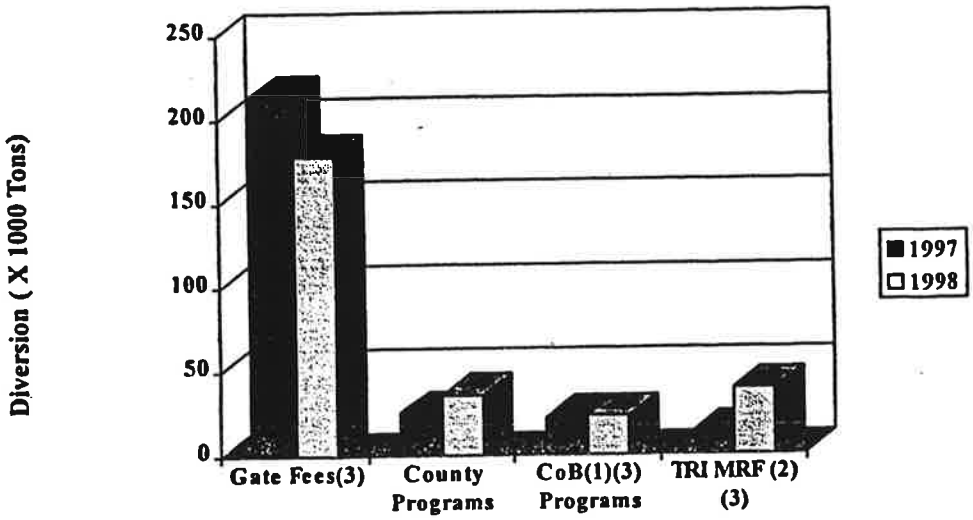
Compliance with Diversion Goal

The Department's preliminary estimate for the County's diversion percentage in 1998 is 46.5 percent. This is derived from preliminary calculations for waste generation and preliminary compilation of waste disposed as shown below:

Waste Generated (calculated)	550, 212 tons
Waste Disposed (measured)	294, 397 tons
Waste Diversion (calculated)	255, 815 tons (46.5%)

These numbers cannot be made final until information is received from other counties that may have received waste generated in Kern County and certain figures are released by the Waste Board. This diversion percentage is down 1.5 percent from 1997. Staff researched for reasons behind the drop but could find nothing substantial. No diversion program had a substantial drop in effectiveness, in fact, there was increased diversion in most of the programs. A comparison of program results for 1997 and 1998 is shown in the following chart:

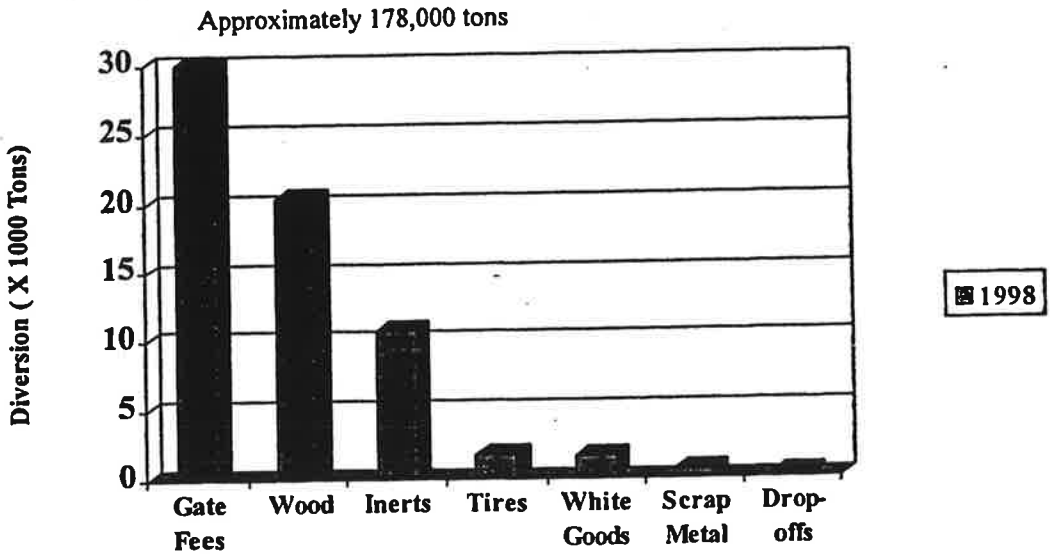
DIVERSION PROGRAMS
1997 & 1998 Performance



1) CoB - City of Bakersfield
2) TRI - Tehachapi Recycling Inc.
3) Only unincorporated portion of program diversion included in chart

Some amount of variability is expected because of changes in human behavior. There is also variability inherent in the formula the Water Board developed to estimate current-year waste generation. The bottom-line is our diversion did not keep up with the growth in disposal. The results of the 1998 County operated diversion programs are shown in the following chart.

COUNTY OPERATED DIVERSION PROGRAMS
1998 Performance



Total cost and cost effectiveness of the programs in 1998 are recorded in the following table:

DIVERSION PROGRAM COSTS 1998			
Program	**Diversion Amount**	**Cost**	**Cost/Ton**
Gate Fees	158,492	$1,300,000	$8.20
County Wood	20,353	$114,388	$5.62
Inerts	10,810	$0	$0
Tires	1,715	$117,120	$68.29
White Goods	1,658	$(20,726)	$(12.50)
Scrap Metal	601	$(3,588)	$(5.97)
County Drop-offs	301	$54,689	$181.69
TRI MRF	38,740	N/A	N/A
City of Bakersfield Greenwaste/Wood	22,703	$338,968	$14.93
City of Bakersfield Drop-offs	156	$20,890	$113.91
N/A - Not Available			

Compliance with Source Reduction and Recycling Element
The status of compliance with our own Source Reduction and Recycling Element is as important as the percentage diversion. The Element identifies dozens of programs. Most of the programs were included with the intent to be implemented while others were only listed for consideration. The majority of the programs have been implemented as indicated in the attached chronology. Only a few programs have not been implemented as proposed and there are valid explanations in each case. None of these programs would result in a significant reduction in disposal. There are other programs that were listed for consideration that will have to be reviewed.

Waste Characterization
The characterization of the waste stream has changed substantially since the study was performed in 1991. The most significant changes have occurred in the wood, yard waste and construction and demolition debris categories. Accurate knowledge of the waste stream composition can be used to assist in making decisions on which diversion programs to implement. However, as we now know, it is very expensive to develop detailed information on the entire waste stream. Therefore, in the future, it may be advisable to only study the waste categories that the proposed program intends to target. In addition, it may be better to make estimates of potential diversion volumes by reviewing

data from existing programs in other areas but with similar conditions. There is a great deal of waste characterization and recycling program information available at the Waste Board and with other jurisdictions.

This issue was discussed with city representatives at a meeting on April 1, 1999. None of the city representatives were interested in conducting additional waste characterization studies at this time. However, the City of Bakersfield is interested in collaborating with the County on a visual survey of landfill loads identifying recyclable wood, yard waste and C&D debris that is still going to disposal. Part of the purpose of such a survey would be enhancing public awareness of existing recycling opportunities.

Options for Obtaining Additional Diversion

The Department has reviewed a number of different options for gaining the additional diversion necessary (approximately 18,000 tons) to achieve the 50 percent goal by the year 2000. Enhancement of the existing programs alone will probably not get the necessary tonnage. Any new program that will require permitting, capital expenditures or that may be controversial can probably not reach full effectiveness in time. Other programs that target diversion quantities beyond the 50 percent goal will require both substantial time and money to implement.

The Department has prepared the options in three levels. The first level consists of programs or activities that can be implemented immediately, involves relatively low costs and targets the 50 percent goal. The second level consists of programs or activities that can be implemented within two or three years, involves moderate cost, may be somewhat controversial and targets the 50 percent goal with some cushion for variance. The third level consists of programs that will take greater than two years to implement, involves significant cost, may be controversial and targets beyond the 50 percent goal.

LEVEL 1: Immediate Implementation, Low Cost, Targets 50 Percent

Enhance the Wood, Green Waste and Inerts Programs

A look at the estimated 1998 waste stream composition shows that wood, green waste and inerts (materials such as concrete and asphalt) were the most significantly reduced. However, there is still a significant amount of these waste types going to disposal and the 1998 diversion program results reveals that these were the most cost-effective materials to divert. To date, publicity of the programs available to divert these materials has been relatively passive. Staff proposes to be much more aggressive in making the public and especially contractors, aware of the opportunities. Not just the County operated programs, but any of the available private or other public programs. There are potentially substantial savings available to the contractors in lower fees and reduced transport distance. Activities would include seeking out the projects and waste generators and more personal contact with them. It is also anticipated to have staff work with contractor associations and Chambers of Commerce to educate their members on the value of the diversion programs.

Waste accounting records gathered at the facility entry gate indicate that substantial amounts of these materials are still disposed. The Department believes it is realistic to target an additional 2,500 tons

of wood waste, 1,500 tons of green waste and 4,000 tons of inert debris in the year 2000. If these targets are reached, diversion would increase by approximately 1.5 percent. The Department proposes to use an extra-help position to conduct the outreach and awareness program. The cost for the position and miscellaneous items is estimated to be $35,000.

3 *Enhance the Recycling Drop-off Program*

As can be seen in the 1998 diversion program results, this program is not a major source of recycling volume. At the same time, it is not a big expense either. Staff proposes to support the addition of more sites in the Bakersfield metropolitan area through an existing agreement with a local nonprofit organization and be more aggressive promoting the use of the facilities. These kinds of programs serve to raise the awareness level of the public as well as increase the volumes collected.

The target is to achieve an additional 500 tons (or 0.5 percent) diversion in the year 2000.

4 5 *Disposal Accounting*

The accuracy of the accounting of solid waste disposal and jurisdiction of origin is very important. The County is responsible for this function per State regulations. The current methods have been evaluated and two areas of potential improvement have been identified.

Standard Vehicle Weights - Pickup trucks and small trailers are not weighed at the gatehouse because of the time and expense it would add to the entry activities and the fact that they transport the smaller portion of the total waste stream. Average weights were developed for pickup trucks and small trailers based on weighing a statistically representative number of vehicles back in 1993. These average weights are assigned automatically for each pickup truck and small trailer that uses the landfill. A routine check of the validity of the current averages has revealed that the average weights may be high by 2 or 3 percent. Higher weights than actual results in over-reporting our disposal which, in turn, underestimates our diversion. If this were confirmed and implemented, our diversion would be increased by at least 1 percent or approximately 5,000 tons.

There is a complication to the implementation of the standard vehicle weight revision. Most of the current landfill operational agreements use the reported disposal tonnage as a basis for the contractor's monthly compensation and incentive payments. The lower disposal tonnage would result in lower contractor compensation without a commensurate reduction in the amount of work. Although the reduction would be minor, it would likely trigger amendments to the existing agreement.

Jurisdictional Distribution of Packer Truck Waste - All packer trucks hauling to landfills are weighed and, therefore, the tonnage records are very accurate. However, many of the packer trucks collect waste from within city limits as well as from the unincorporated county in the same load, especially in the Bakersfield metropolitan area. The current methodology for determining how much waste originates in each jurisdiction proportions the total weight based on bin capacity information provided by each city and franchise hauler. Collection route changes that have been made and increased familiarity with the available information has lead Department staff to explore more direct ways to determine the origin of the waste. Staff's preliminary conclusion is that accuracy can be increased by modifications in the methodology. The Department is in the process of reviewing the issue with the cities since they may be impacted by any change and the original methodology was

shared and reviewed by them. Staff does not know at this time if the effect on the unincorporated area will be beneficial or detrimental but, regardless, if the reporting can be made more accurate, we should do so.

Landfill Salvaging

Prior to 1990, the landfill operators used salvagers to perform some of the routine operational tasks. Although this resulted in a small amount of diversion from the inbound waste, many necessary tasks were not performed and violations became more prevalent as the regulatory agencies began to increase attention to the facilities. Consequently, salvaging has almost disappeared entirely from the landfills. In the early 1990's, the Department experimented with including diversion requirements in the landfill operational agreements. The pilot programs were terminated due to high cost and low diversion.

The Department would like to try a new approach to landfill salvaging. There are small entrepreneur companies that specialize in landfill salvaging. At least one company offers to salvage at the landfill with no cost to the operator. They subsist off the revenue from the salvaged material. The Department would like to try to work out the liability and contractor coordination issues for a pilot program at one of the landfills. The salvage company claimed they could get four or five tons a day at a site like Bena Landfill which would be as much as 1,500 tons in a year. The Department would like to start at a site with less traffic volume and evaluate the safety and coordination issues before implementing at multiple sites.

If three sites (Arvin, Bena and Shafter/Wasco) can be brought on line by the year 2000, Department staff thinks it reasonable to estimate that an additional 3,000 tons (or 0.6 percent) of diversion can be achieved. The only cost would be staff time to arrange and administer the agreements.

LEVEL 1 SUMMARY

Program	Targeted Diversion	Cost
Enhance Wood, Green Waste, Inerts Program	8,000	$35,000
Enhance Drop-off Program	500	$ 5,000
Standard Vehicle Weights	5,000	0
Jurisdictional Distribution	Unknown	0
Landfill Salvaging	3,000	0
TOTAL	16,500 (3%)	$40,000

LEVEL 2: Short-Term Implementation, Medium Cost, Targets 50 Percent

Construction and Demolition Debris Materials Recovery Facility (C&D MRF)
The basic concept of a C&D MRF is to take in loads of mixed C&D debris and sort-out the recyclable materials and transport the residuals to the landfill. At least two such facilities already exist in Kern County, the Tehachapi Recycling, Inc. MRF performs this activity as one of their sorting programs and the Valley Tree Disposal Facility in the Bakersfield area.

The expense of such an operation can vary a great deal depending on how selective the operator is in which loads they accept. Obviously, the more segregation that takes place on the construction site, the less costly the facility operation will be. But there is also a cost to the segregation taking place at the construction site. The County should encourage and be supportive of any additional efforts for this type of program. No estimate has been made of how much new diversion could be generated by a program like this.

Separate Collection of Green Waste
The City of Bakersfield and many other communities throughout the state have proven that separate collection of green waste can divert a significant amount of waste from disposal. The basic concept is to collect residential yard waste separately from the household waste. To collect the green waste separately requires the haulers to covert to automated collection. The yard waste is then processed into compost and sold or given away for beneficial uses. The City of Bakersfield currently runs this program within the City limits. The Department believes there would be many advantages to implementing a matching program in the unincorporated metropolitan area. Besides the obvious advantage of increased diversion, there would be consistency of service for the public and the haulers.

Staff estimates that 15,000 tons of green waste would be collected from the residences currently receiving hauler service. The City of Bakersfield reports that the current cost of their composting facility is about $20/ton. The County could either negotiate to use Bakersfield's facility or site a new facility or use a privately owned and operated facility. There is also potential to collaborate with other Kern County cities to minimize the costs by economies of scale.

Such a program is by no means simple and risk free. Composting is a specialized technology and finding or developing markets is critical to any program's success. But if implemented correctly, this program is probably the most cost-effective means to assure meeting the 50 percent goal.

(Options Examined, But Not Recommended)
Material Bans, and Permit Requirements
The philosophy, for the most part, behind County-operated diversion programs to date has been voluntary participation. The only exceptions are the tire and white goods (large appliances) programs. These two programs are examples of landfill bans as a result of State legislation. The same concept could be applied to other material types such as wood, yard waste or inert debris. This would force the public to segregate these material types and transport them separately to diversion facilities. A similar approach would be to require construction contractors to segregate the waste materials from projects into prescribed categories for diversion purposes. This could be done through the building permit process. There are examples of both types of programs elsewhere in California.

Actions such as these could yield a significant amount of diversion but would also potentially raise construction costs significantly. In addition, if there is not a sufficient infrastructure for accepting, processing and marketing the diverted material then the program will cause a great deal of disruption and confusion to the industry. **The Department does not recommend such activities at this time** for these reasons and the fact that we are so close to the mandated goal.

10 *Fee Structure*

The most significant program the County has implemented for diversion has been the gate fee on non-residential waste. Virtually overnight, thousands of tons of construction and demolition wastes ceased coming to the landfills. Inert recycling already existed to a limited extent in the County but volumes soared once it became more expensive to bury the material rather than process it into usable products. Other wastes, in less significant amounts, also began to be diverted as business and industry with large waste disposal began to search for portions of their waste streams that they could recycle.

Fee structure has been used in another way to promote diversion. Discounts are offered for materials that are targeted by a diversion program if the customer cooperates by segregating the materials in advance. This has been a key strategy to the success of the County Wood Waste Diversion Program and City of Bakersfield Green and Wood Waste Facility.

Similar to landfill bans, an infrastructure for handling the material should be in place prior to implementation of such a tactic. The most likely candidate material type for this approach at this time is yard waste in the metropolitan Bakersfield area. Despite the convenience of the City of Bakersfield green waste facility, much of the residential yard waste still comes to the landfill. Charging for the disposal of this waste type in the metropolitan area would increase the incentive for the public to use the recycling alternative over disposal. However, with only one facility in the metropolitan area capable of handling the material, the criteria for sufficient infrastructure may not be met. There are other complications related to equity that need to be considered as well. **The Department does not recommend implementation of such a program at this time.** Activation may be more appropriate if the entire metropolitan area is converted to a separate collection of green waste program.

LEVEL 3: Long-Term Implementation, Medium to High Cost, Targets Greater than 50 Percent

Strategy Plan by Hilton, Farnkopf & Hobson

The Board has approved a consultant, Hilton, Farnkopf & Hobson, to assist the Department in the preparation of a Strategy Plan. The scope of work agreed to for that project includes consideration of diversion options that target beyond the 50 percent goal. This should include municipal waste material recovery facilities, curbside collection of general recyclables and the conversion of small landfills to transfer stations. Their report is due to the County Administrative Office by August 1999. Consequently, it was chosen not to address these types of projects in this report.

Consequences of Not Achieving the Diversion Goal

A lot of speculation has been made about the consequences to a jurisdiction that fails to meet the 50 percent goal by the year 2000. Measurement of success will be made at the end of the year 2000. The statutes allow the Waste Board to administer up to $10,000 per day fines. To date, only three jurisdictions have been assessed fines for the 25 percent by 1995 goal and they have been far below the maximum of $10,000. The Waste Board has indicated that any jurisdiction that is above 40 percent diversion will be low on their priority list. The other indicator that the Waste Board will watch for is substantial compliance of the jurisdiction's own Source Reduction and Recycling Element.

Since the inception of the Integrated Waste Management Act, there has been a lot of attention to definition of "good faith effort." The concern is to protect a jurisdiction that has made every attempt to comply with the law (paid fees, developed plans, tracked waste and implemented programs) yet still come up short of the goal. To this end, legislation was passed in 1998 that helps to define alternatives to punitive fines. The Waste Board can grant extensions and/or reductions in the diversion for jurisdictions that have made a "good faith effort."

The Department intends to continue measures to reach the 50 percent diversion goal again by the year 2000. However, there should not be a sense of panic should this not come to fruition because Kern County has made a good faith effort. The most important thing for us at this point is to keep making progressive steps to get there.

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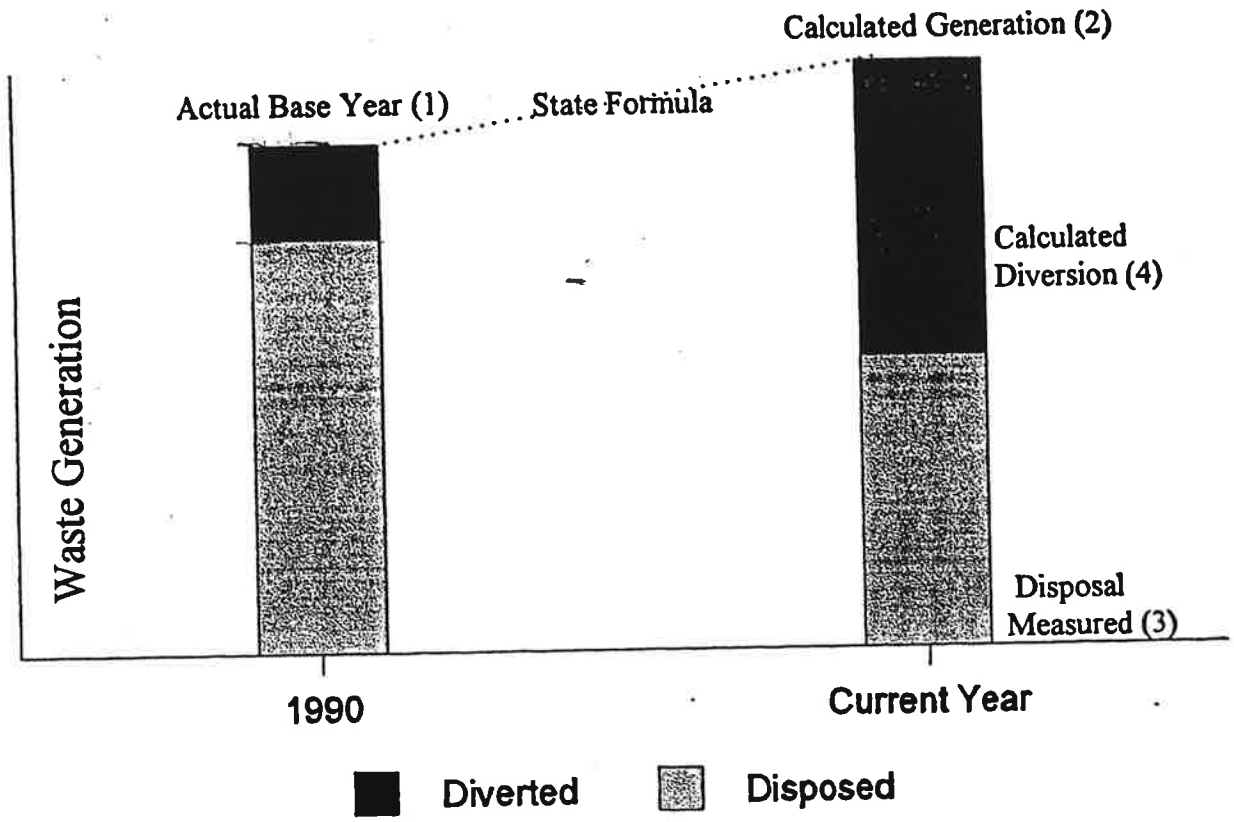

1. Base year generation determined by waste characterization study and 1990 disposal data
2. Current year waste generation calculated by applying state formula
3. Current year waste disposal amount from measured tonnages at facilities
4. Current year diversion determined by subtracting measured disposal from calculated generation.

DIVERSION PROGRAM CHRONOLOGY

1989

CareCycling (ongoing)

- Implemented a recycling program for office paper generated at County buildings
- Office paper collected within buildings by developmentally disabled clients of BARC
- Clients learn job skills and are able to earn wages from the sale of paper

Concrete and Asphalt (Inerts) Diversion Program (ongoing)

- Continuance of an existing program
- Program uses source separated loads of inert material for facility improvements
- Program reduces amount of aggregate subbase material which needs to be purchased by WMD for facilities operations

1990

Christmas Tree Recycling (annual)

- Implemented recycling program for Christmas Trees
- Christmas Trees collected throughout the County for use as erosion control, cogeneration fuel, compost or habitat improvement
- Includes promotion of local vendors selling live trees for discount and campaign to waste reduction tips for holidays

Pilot Wood & Green Material Diversion Program (ongoing)

- Pilot program at China Grade Landfill to divert largest component of waste stream
- Contractor's agreement amended to include diversion of wood and green material
- Green material (grass and leaves) used for daily cover
- Wood material ground periodically, used for daily cover

Phone Book Recycling (annual)

- Implemented recycling program for used phone books
- Phone books collected for recycling at the same time new books distributed
- Educational program used by local schools to promote recycling and environmental awareness

Pilot Recycling Program at Kern Valley and Mojave Landfills (discontinued)

- Pilot program at Mojave and Kern Valley Landfills to divert 10% of waste stream
- Agreement amended to require contractor to recycle plastic, glass, paper and metal
- Operator collects recyclables by sorting waste at the dumping face and establishing designated areas for source separated recyclables

1991

Pilot Recycling Program at Taft Landfill (discontinued)

- Pilot program at Taft Landfill to divert 10% ,of waste stream
- Agreement amended to require contractor to recycle plastic glass, paper and metal

DIVERSION PROGRAM CHRONOLOGY

- Operator collects recyclables by hand sorting waste as it is run over a custom conveyor belt

Latex Paint Recycling (ongoing)
- Implemented recycling program for unwanted latex paint
- Paint refurbished by local paint supply company and used by cities and community groups to cover-up graffiti

Commercial Pesticide Container Recycling (privatized)
- Implemented recycling program for empty pesticide containers from farmers and crop-dusters
- Empty pesticide containers collected at landfills and shipped to the Midwest for use in new pesticide containers

Kern County Fair Booth (ongoing)
- Implemented information booth and demonstration projects at Kern County Fair
- Booth staffed by Department employees on volunteer basis for 12 straight days
- Approximately 200,000 attend the Fair each year

Project Erase Waste (still available)
- Developed 6th grade curriculum on solid waste issues
- Curriculum distributed to every 6th grade teacher in the County

Info-Line (discontinued)
- Implemented information 24-hour information hotline for solid waste issues
- Recorded messages provide information on recycling centers and how to handle hazardous waste

Tehachapi Recycling MRF Opens (ongoing)
- Using loan from County, Benz Sanitation opens material recovery facility in Tehachapi

1992

Metro Bakersfield Wood &Green Material Diversion (ongoing)
- County and City of Bakersfield combine funds to divert wood and green material from metro Bakersfield
- County agrees to help fund City operated facility that opened in 1991 to divert source separated wood and green material
- Wood material ground for compost and cogeneration
- Green material used for composting

Metro Bakersfield Drop-Off Program (ongoing)
- County and City of Bakersfield combine funds to collect recyclables in metro Bakersfield area
- County agrees to help fund City Drop-Off Recycling Program started in 1991
- Designated collection centers for Bakersfield area residents to deposit their recyclables

DIVERSION PROGRAM CHRONOLOGY

- Six drop-off centers accept: plastic and glass bottles, aluminum and tin cans, paper and cardboard

Wood & Green Material Program Expanded (ongoing)
- Wood & Green Material Program expanded to Arvin, Taft, Shafter and McFarland/Delano Landfills
- Landfill operating agreements amended to include diversion of wood and green material
- Wood ground and sold for cogeneration or used for daily cover
- Grass and leaves used for daily cover to conserve dirt and landfill space
- Use of daily cover conserves dirt and valuable landfill space

Lebec Recycling Transfer Station (discontinued)
- Replaced landfill with transfer station and required operator to divert 10% of waste stream
- Operator segregates glass, metal, plastic and paper as it is dumped on tipping pad

Waste Watch (ongoing)
- Developed television campaign to promote awareness regarding solid waste issues
- Two minute segment aired monthly during local news cast

Recycling Guide (updated annually)
- Developed comprehensive guide to recycling for entire County
- Multi-page, user friendly hand out on how, where and why to recycle
- Distributed to residents, business, schools and at community events

1993

Pilot Drop-Off Center Program (ongoing)
- Established first of six drop-off centers in County unincorporated areas
- User-friendly recycling centers open 24 hours a day, seven days a week
- Centers collect plastic and glass bottles, aluminum and tin cans, paper and cardboard

Newsletter (ongoing)
- Implemented quarterly newsletter covering and creating awareness regarding current solid waste issues impacting County
- Newsletter distributed to government agencies and local industry

Gate Fees (ongoing)
- Implemented gate fees for non-residential generators instead of Land Use Fee
- Gate fees charge to non-residential generators based on the amount disposed
- Gate fees provide economic incentive to reduce or recycle waste
- Stimulated growth and stability in recycling industry, especially construction and demolition materials

Tire Diversion Program (ongoing)
- County stops accepting tires for disposal and implements a tire recycling program

DIVERSION PROGRAM CHRONOLOGY

- County enters into agreement with tire recycler to process Kern County tires
- County implements special tire disposal fee to cover cost of tire recycling program

White Goods/Scrap Metal Program (ongoing)
- County begins white goods (large appliances) and scrap metal recycling at all solid waste facilities
- Transportation and marketing provided by contractor
- Revenue generating program as of 1996

Tehachapi Recycling MRF Expands (ongoing)
- Tehachapi landfill closes to public
- All waste from Tehachapi area processed through MRF

1994

Expansion of Wood & Green Material Program (ongoing)
- Expanded wood and green material program to serve northwest and northeast part of County
- Cooperative effort between County and Cities of Taft, Shafter, Wasco, McFarland, Delano
- From Taft to Shafter residents able to recycle grass, leaves, lumber and branches
- Material collected at County solid waste facilities and City corporation yards

Used Oil Recycling Program (ongoing/grant funded)
- Oil recycling grants awarded to Kern County to promote oil recycling
- Collection sites, containers, and information on oil recycling made available to the public

Mattress Recycling (discontinued)
- Mattresses collected for recycling at Arvin and Bena Sanitary Landfills
- Local company reconditions and resells mattresses at reduced cost

1995

Expansion of Drop-Off Center Program (ongoing)
- Drop-off recycling center opened in Kern River Valley area
- Center provides needed recycling options to rural residents

- Center accepts plastic and glass bottles, tin and aluminum cans, paper and cardboard

RMDZ (ongoing)
- Recycling Market Development Zone created in Kern County
- New recycling businesses attracted to Kern County
- Business eligible for low interest loans, low utility costs, employee training & permit assistance

DIVERSION PROGRAM CHRONOLOGY

Backyard Composting Program (discontinued)
- Composting workshops, information distributions, and compost unit sale
- Verma-composting and backyard compost kits made available to schools

McFarland-Delano Green Material Program (ongoing)
- Green (grass and leaves) material diverted for land application
- Green material applied to fallow area adjacent to transfer station to improve value of soil

1996

Wood Material Program Modified (ongoing).
- Implemented Countywide strategy to divert wood (lumber and branches) from landfills and transfer stations
- Proposals solicited for managing organics throughout County
- Program based on proposal that targets largest portion of waste stream at lowest cost
- Program does not include diversion of grass and leaves

Glennville Transfer Station (ongoing)
- County begins operation of station with County staff and adds recycling services and education
- Station begins sorting of waste material and recovery of plastics, glass, paper, and metals

Buttonwillow Transfer Station (ongoing)
- County begins operation of station with County staff and adds recycling drop off services and education
- Station begins recovery of plastics, glass, paper, metals, and wood waste

Expansion of Drop-Off Program (ongoing)
- Established public/private partnership to site 4 drop-off recycling centers in metro Bakersfield area
- County funds drop-off centers operated by local non-profit organization
- Centers increase recycling opportunities for all Bakersfield residents
- Centers accept: plastic and glass bottles, tin and aluminum cans, paper and cardboard

1997

Kern Valley Recycling Transfer Station (ongoing)
- Replaced landfill with recycling transfer station
- Agreement with transfer station operators provides economic incentive for recycling
- Transfer station diverts wood, inerts, tires, metal and is equipped with drop-off center

1998

Procurement Changes
- General Services begins buying and using re-refined oil in County fleet
- Success of re-refined oil used County fleet encourages private fleets to switch to re-refined oil

2000 SOLID WASTE DIVERSION STATUS REPORT

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May 2000

Printed on "Recycled Paper"

2000 Solid Waste Diversion Status Report

INTRODUCTION

On April 20, 1999, the Waste Management Department submitted to the Board of Supervisors the "1999 Solid Waste Diversion Status Report" to recount how the County has responded to AB 939 and its 50% diversion mandate. The Board of Supervisors has made compliance with this statutory requirement a specific goal for the Director of the Waste Management Department. The Department has been executing the plans established in the Source Reduction and Recycling Element in 1991, which describes what programs and actions the County proposed to implement in order to meet the 50% diversion goal. The diversion rate reported to the California Integrated Waste Management Board for the Kern County unincorporated area for 1998 was 46.5%. The 1999 Status Report identified program enhancements and additional programs that the Department planned to implement to achieve the remaining 3.5% diversion. We are pleased to report that the current projections for 1999 indicate that we are less than a percent away from the 50% diversion goal and on target to exceed 50% for the year 2000. The following is a report on the status of this ongoing effort.

The Department has recommended a number of different options in the 1999 Report for gaining the additional diversion necessary to achieve the 50% goal by the year 2000. These options were prepared in three levels. The first level consisted of programs or activities that could be implemented immediately, involved relatively low costs, and targeted the 50% goal. The second level consisted of programs or activities that could be implemented within two or three years, involved moderate cost, may be somewhat controversial, and targeted beyond the 50% goal to provide some cushion for variance. The third level involved targeting well beyond the 50% goal.

Level 1 Activities Update

In general, all of our diversion programs demonstrated an increase in 1999 tonnages when compared to 1998. The progress achieved specifically within the Level 1 options in 1999 is as follows:

1. **Enhancement of the existing programs for diverting inerts, wood and green waste.** The following is a list of enhancements activities conducted by the Department:
    - Construction and demolition sites were visited to identify additional recycling opportunities that could be available to the building industry.
    - Building industry groups were contacted and provided with information regarding recycling options available through the County and the private sector.
    - The Department used an extra help employee to enhance the existing green and wood waste diversion program at Bakersfield Metropolitan

4. **Disposal Accounting - Revisions to the methodology for determining the jurisdiction of origin for waste hauled in packer trucks.** To improve the accuracy of determining the jurisdiction of origin for waste hauled in packer trucks, modifications were made to the methodology. The modifications involved directly matching tonnage data collected at the facility gatehouses to the jurisdiction rather than utilizing a formula that had been developed in 1995. It was unknown what impact it might actually have on the jurisdictions involved, including the unincorporated County. With four quarters of data available since implementation, it appears that the modifications had no discernable impact on the County disposal tonnages.

   There is still work to be done to sort out similar issues between the County and City of Bakersfield. The situation in the Bakersfield metropolitan area is much more complex than anywhere else in Kern County and, therefore, it will take longer to develop a solution that is suitable to both jurisdictions. We expect some modifications to be implemented as early as the first quarter of 2000 that may reduce the unincorporated diversion by approximately 1%.

   Another significant jurisdictional reporting issue became apparent while working on this program. It was discovered that a major regional composting facility in Kern County was not reporting the origin of waste in conformance with State regulations. In short, the facility was receiving its greenwaste composting feedstock from jurisdictions throughout the State and the sizable amount of contamination (mainly plastic) that was being disposed of at the Arvin Landfill was being credited to Kern County as the jurisdiction of origin. The correction initiated by the Department reduces the unincorporated disposal amount by approximately 13,000 tons per year and correctly allocates it back to the jurisdictions of origin. The corresponding increase in diversion is approximately 2.5%.

5. **Landfill Salvaging.** The Department made several unsuccessful attempts at locating companies that would implement a pilot salvaging program. It was discovered that the salvaging companies that expressed interest had changed their mind or had gone out of business. Existing landfill contractors were also approached and were not interested, primarily due to liability issues.

Level 2 Activities Update

The Level 2 options have progressed more quickly than projected in the 1999 Report. Commitments have been made by Kern Refuse, Inc. to have a separate collection of greenwaste program fully implemented by September 2000 and a Construction and Demolition Material Recovery Facility in start-up phase by late summer of 2000. A detailed discussion is as follows:

1. The Department has entered into an agreement with the Zone 2 Haulers to implement separate collection of yard waste in the unincorporated Bakersfield metropolitan areas. Some of the haulers began delivery of refuse collection carts in May of this year, however, full implementation of the yard waste collection program is not expected to occur until September 2000. Approximately 25,500 residents will be serviced and it is anticipated that about 7,000 tons of yard waste will be diverted from the landfill by the end of this year. This represents a little more than one percent additional diversion towards the total diversion rate for the year 2000. The program is projected to divert 15,000 tons (about 3% diversion) in 2001, which will be the first full year of implementation.

2. Kern Refuse, Inc. has moved forward with plans to build a Construction and Demolition Material Recovery Facility (MRF). A land lease has been secured between the City of Bakersfield and Kern Refuse, Inc., and they are currently working on infrastructure and off-site improvements. Operations for ground sorting may start as early as June 2000 with construction of an enclosed building to be completed by December 2000. It is anticipated that between the months of July through December 2000 an additional 600 tons of construction and demolition materials will be diverted that would otherwise have been disposed. The MRF is planned to be fully operational by January 2001 and is projected to divert up to 6,500 tons (slightly more than 1% diversion).

3. In addition to the previous two programs, an unanticipated program has been initiated by Westside Waste Management, Inc., the franchise hauler for the Taft area. Westside Waste is in the permitting stages of a Materials Recovery Facility that will target select loads of waste that are especially high in recyclables. Westside Waste estimates that they will be able to divert approximately 2,400 tons per year from the Taft Landfill. Westside Waste expects to be on-line by July, 2001.

The Department has continued with the development of additional new programs and activities that will potentially assist in the overall efforts for the year 2000 and beyond.

- **Land application of green waste at McFarland-Delano Transfer Station.** This program is being coordinated with the City of Delano to provide a cost effective recycling option for their proposed curbside greenwaste collection program. Most of the material will come from the City of Delano and, therefore, most of the funding will come from the City of Delano as well. The County unincorporated area will benefit to the extent that green waste is self-hauled to the Transfer Station by unincorporated residents.

Level 3 Activities

Consideration of recycling programs and activities that would take the diversion rate well beyond 50% (Level 3) will be addressed in a separate report that is expected to be submitted later this summer.

SUMMATION

It appears that the County is on track to achieve the 50% diversion goal in the year 2000 and have a small cushion built up by the year 2001. The Department has no intention of diverting its attention away from waste diversion. The Department is aware that there are those in the public that are interested in some of the conventional recycling programs that have not yet been implemented. The Department will continue to explore opportunities for cost effective diversion regardless of the calculated diversion rate. The Department considers it to be in the best interest of the public and the environment to minimize disposal through cost effective diversion.

Another reason it is important for the Department to continue to search for ways to improve diversion is the uncertainty in the diversion calculation. There are many factors outside of the County's control that may impact the calculated diversion rate. The possibility exists that we could find our diversion rate reduced despite no reduction in productivity from our diversion programs. All the more reason to consider adding to our diversion activities.

Attachment No. 1

EXPLANATION OF CHANGES TO 1998 PRELIMINARY FIGURES

The 1999 Solid Waste Diversion Status Report submitted to your Board on April 20, 1999 contained estimates of the amount of waste generated, the amount of waste disposed and the amount of waste diverted in the County for 1998. The report states that final waste tonnages could not be determined until other jurisdictions, and the State of California, published final numbers which are used in determining the waste disposal figures for Kern County.

The 1998 waste figures used in this report are the final amounts based on the final information received by the State of California and other jurisdictions subsequent to the completion of the 1999 Report. These numbers vary from the 1999 Report estimates by less than one-half of one percent. A detailed comparison is presented below:

1998 DIVERSION PROGRAM SUMMARY		
	1998 Preliminary	**1998 Final**
Waste Generation	550,212	553,231
Disposal Tonnage	294,397	295,723
Diversion Tonnage	255,815	257,508
Diversion Rate	46.5%	46.5%

The Waste Generation tonnage was adjusted based on values provided by the State for the formula that the State requires to estimate Waste Generation.

The Disposal Tonnage was adjusted based on information received from other jurisdictions regarding waste disposed in their jurisdiction that originated in Kern County. The information was not received until after completion of the 1999 Report.

The Diversion Tonnage is calculated by subtracting the Disposal Tonnage from the Waste Generation tonnage and, therefore, changed due to the changes in the other two factors.

This routine of corrections to prior year figures will occur each year. This is because the final information needed from the State and other jurisdictions is not available until mid- to late summer and the Department believes it is important to report on the status earlier in the year. We have found that the corrections are relatively insignificant and hope it continues to be so in the future.

Attachment No. 2

TONNAGE PROJECTIONS

Waste Generation

The projections for waste generation are based on the trend established by the preceding four years. A standard linear regression formula was applied to the "Final" values listed in the table below to derive the "Preliminary" and "Projected" values.

COUNTY WASTE GENERATION TOTALS							
	1995 (Final)	1996 (Final)	1997 (Final)	1998 (Final)	*1999 (Prelim.)	*2000 (Proj.)	*2001 (Proj.)
Waste Generation	531,010	539,643	550,212	553,231	562,832	570,555	578,278

* Values projected by linear regression method.

Waste Disposal

The projections for disposal tonnage are made by using the previous year tonnage and adding or subtracting anticipated increases or decreases. The table below shows the trend since 1995 and includes the projections for the next two years.

COUNTY DISPOSAL TOTALS							
	1995 (Final)	1996 (Final)	1997 (Final)	1998 (Final)	1999 (Prelim.)	2000 (Proj.)	2001 (Proj.)
Disposal Tonnage	269,122	278,832	286,147	295,723	286,292	282,415	275,038

The year 2000 value was estimated from the factors shown in the following equation:

((Year 2000 waste generation - 1999 waste generation) x 1.00) + Jurisdictional generation adjustments - Standard vehicle weight adjustment - Additional green waste diverted due to partial implementation of metro program - C&D diversion from partial implementation at new metro MRF facility in Bakersfield area = Estimated 2000 disposal tonnage

The year 2001 value was estimated from the factors shown in the following equation:

((Year 2001 waste generation - 2000 waste generation) x 1.00) - Additional green waste diverted due to full implementation of metro program - C&D diversion from full implementation of new MRF facility in Bakersfield area - Diversion from partial implementation of new MRF in Taft area = Estimated 2001 disposal tonnage.

2001 SOLID WASTE DIVERSION STATUS REPORT

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September 2001

Printed on "Recycled Paper"

INTRODUCTION

The Waste Management Department annually submits a report to the Board of Supervisors updating the status of solid waste diversion in Kern County. This report addresses the level of compliance with the Source Reduction and Recycling Element (SRRE), and the 50% diversion mandate established by AB 939. The SRRE is the plan which was submitted by the County of Kern to the California Integrated Waste Management Board that details each program or policy which would be implemented in an effort to meet the requirements of AB 939. This report also includes a summary of the current diversion programs that the Department operates, or is involved with, that produce measurable amounts of diversion.

The State calculated diversion rate for Kern County for the year 2000 is 52%. Although the County has successfully attained the 50% goal, it is recognized that there are many factors involved in this success that are out of the direct control of the Department. A detrimental change in any of these factors could cause the County's diversion rate to fall below the mandated level. Therefore, the Department continues to manage the existing programs closely to maximize their effectiveness and explore ways to cost effectively increase the diversion rate. In addition, the Department is researching options that would take the County well beyond the 50% diversion level. A separate report has been prepared for the Board of Supervisors' review and consideration.

This report includes State provided information of year 2000 diversion rates for the cities within Kern County and the other Counties within the State.

SOURCE REDUCTION & RECYCLING ELEMENT

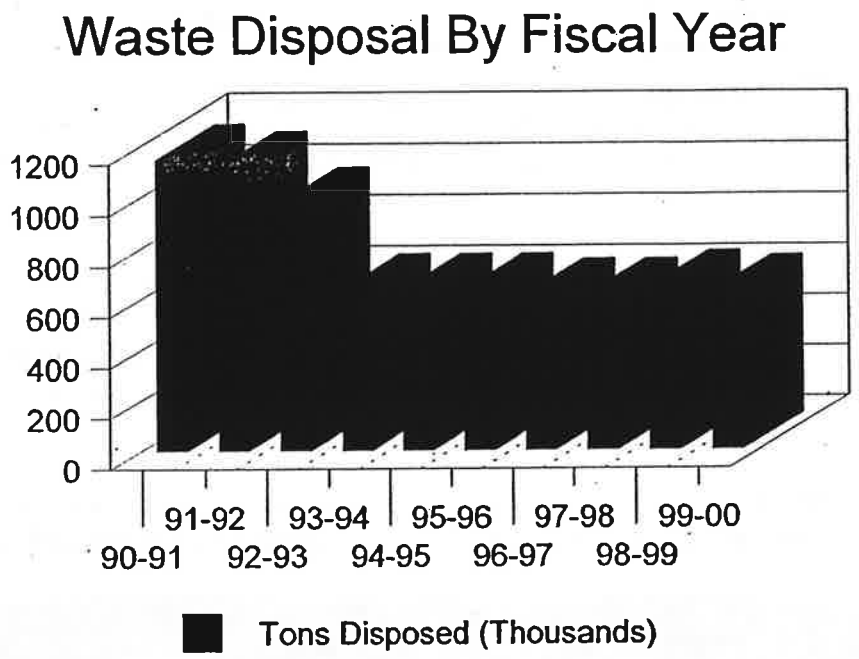
Kern County outlined the strategy to comply with the requirements of AB 939 in their Source Reduction and Recycling Element approved by the Board of Supervisors on October 22, 1992 and accepted by the California Integrated Waste Management Board on January 24, 1995. This document identified 35 separate programs which would be evaluated or implemented in order to increase the overall level of recycling in Kern County.

Programs listed in the SRRE include recycling education campaigns, enactment of economic incentives such as gate fees at Kern County Solid Waste Facilities, implementation of procurement policies designed to reward companies using recycled content in their products, physical diversion programs such as wood, metal, and tire recycling, and support of programs operated by private recycling companies who do business in Kern County. A complete listing of the programs included in the SRRE is included with this report as Attachment 1.

The results of programs listed in the SRRE which are either solely operated by the Department, or which the Department is involved in operating, and produce a tangible amount of diversion are discussed in more detail in this report.

GATE FEE

In July of 1993 the Department instituted a gate fee system for commercial waste and construction and demolition material. This change in how fees were collected for landfill use provided an economic incentive to businesses to find alternate ways to handle their waste. Many commercial generators began recycling and diversion programs to minimize the amount of waste they were sending to the landfill. The vast majority of the recycling came from the construction and demolition industries. The result of these actions was a marked decrease in the amount of waste coming into Kern County facilities as shown in the chart below. The cities and the county benefit greatly from this program.



OTHER COUNTY PROGRAMS

In 2000 the Department continued to operate the various diversion programs at the solid waste facilities which were in place in previous years. These programs were enhanced as outlined in previous reports in order to maximize the amount of diversion each program was obtaining. The results for these programs are shown in the subsequent tables.

In addition to the gate fee program, the Department has implemented a number of programs to divert material brought to County operated landfills and transfer stations. The tonnages diverted by these programs are listed in the following table:

DIVERSION PROGRAMS RESULTS* Tons Diverted			
Program	1998	1999	2000
County Wood	16,625	20,342	22,334
Inerts	10,810	12,493	18,952
Tires	1,715	2,010	1,624
Scrap Metal/White Goods	2,259	2,979	3,052
County Drop Offs	301	426	488
Total	**31,710**	**38,250**	**46,450**

(* *The County Wood, Inerts, Tires, and Scrap Metal/White Goods programs benefit both the County and Cities Diversion figures. The County Drop Off totals are only for the County un-incorporated area.*)

The programs listed above, except for the waste tire program, experienced increases in the amount of material diverted during this reporting year. These programs saw diversion increases ranging from 2% in the white goods/scrap metal program to as high as 52% in the inerts program. The net result for the above listed programs is shown as an 8,200 ton increase in the amount of material diverted in Kern County for the year 2000.

In order to determine if these programs are being operated in a cost effective manner a cost per recycled ton analysis was done. The resulting cost per recycled ton is detailed in the table below.

Program Cost Per Ton 2000					
PROGRAM	TONNAGE	ADMIN COST	CONTRACT COST	REVENUE	COST PER TON
Wood	22,334	$8,696	$269,487	$ 0	$12.46
Inerts	18,952	$73	$ 0	$ 0	$ 0
Tires	1,624	$18,235	$118,114	$146,684	<$6.36>
Scrap Metal White Goods	3,052	$32,891	$126,596	$76,915	$27.06
Drop Off	488	$7,983	$68,025	$10,611	$134.01
Total	**46,450**	**$67,878**	**$582,222**	**$234,210**	**$8.95**

GREENWASTE DIVERSION

The largest single diversion tonnage increase for the unincorporated area of Kern County was seen in the Green Waste Diversion figure for the year 2000. This increase was due to the implementation of the curb side green waste collection program implemented in the unincorporated metro Bakersfield area as a result of mandatory collection. This program diverted approximately 11,000 tons of material even though it was only fully implemented for half of the year. It is estimated that the program will divert 15,000 ton of material during a full year of implementation.

City of Bakersfield Mt. Vernon Facility			
Program	1998	1999	2000
COB Green Waste Self Haul Material	22,703	20,926	17,492
COB Green Waste Curbside Collection	n/a	n/a	11,099
Total	**22,703**	**20,926**	**28,591**

The County utilizes the City of Bakersfield Mt. Vernon compost facility to process material diverted through the curbside collection program. The cost of utilizing this facility is provided to the County by the City of Bakersfield. That cost is calculated by taking the total operating cost of the facility, subtracting any revenue received by the City from the sale of finished material, and proportioning the resulting net cost between the City and the County. The proportion is based on the amount of inbound tonnage received from County residents.

City of Bakersfield Mt. Vernon Facility 2000				
PROGRAM	TONNAGE	ADMINISTRATION COST	KHT CONTRACT COST	COST PER TON
Greenwaste	28,591	$6,870	$829,288	$29.25

TEHACHAPI MRF

The Tehachapi MRF continued to provide diversion for the County, the City of Tehachapi, and California City. During the year 2000, the facility diverted 20,914 tons of mixed municipal waste and provided a recycling area for approximately 133,288 tons of inert material. The breakdown on the diversion of the mixed municipal waste is shown in the table below.

TEHACHAPI MRF	
Jurisdiction	Amount Diverted (Tons)
County of Kern	12,402
City of Tehachapi	5,512
City of California City	3,000

DISPOSAL ACCOUNTING UPDATE

The Department reported in 1999 that standard vehicle weights would be adjusted on a quarterly basis to ensure greater accuracy on a continuous basis. This program remains in place and has resulted in a decrease in the reported disposal of approximately 8,000 tons in 2000. This represents approximately 1.5% in the diversion rate for Kern County.

The Department continues to work to improve the accuracy of the jurisdictional accounting for waste hauled in packer trucks. While most programs in the County have been modified to more accurately track the jurisdictional information, the Department continues to work with the City of Bakersfield to implement a similar accounting method. As outlined in the 1999 report, this situation will require a more comprehensive plan due to the complexities involved. In this reporting year, one adjustment has been made which shifts approximately 4,000 tons of disposal from the City to the County. This has a positive impact on diversion for this City and a negative impact on the County. This increase in disposal tonnage is reflected in the diversion rate estimate for 2000. Discussions are continuing on this subject and the potential remains for an even more significant shift in the future.

FUTURE PROGRAM UPDATE

The 2000 Diversion Status Report listed a number of programs as future, or Level 2, programs. These programs would be implemented over a two-year period by both the Department and private waste haulers working in Kern County. The listed programs consisted of ;

1. Kern Refuse/City of Bakersfield Construction and Demolition Material Recovery Facility.
2. Westside Waste Management Materials Recovery Facility.
3. Commercial Waste Audits performed by the Waste Management Department.

The Kern Refuse Association and the City of Bakersfield plan to jointly operate a facility which will collect and transport construction and demolition material to a material recovery facility operated

by Crown Disposal. They plan to accept material from the franchise haulers as well as commercial and residential self haul.

This facility is scheduled to begin operation sometime before the end of this year. City staff estimates that they will eventually receive between 30,000 and 50,000 tons per year of material from the metro Bakersfield area. They expect Crown Disposal will be able to divert as much as 70% of this material. There is no firm estimate on what the expected jurisdictional breakdown will be between the County and the City of Bakersfield so the net effect for County diversion can not be determined at this time.

While the diversion will certainly be of benefit to the County, the fiscal impact of the program to the Department may be substantial. The targeted material for this program is material for which the Department currently receives the $29 per ton gate fee. Implementation of the program will reduce the revenue received by the Department by as much as $1,450,000 per year.

The Westside facility was expected to be on line by July 2001 but siting problems have delayed the project. Work is continuing on the facility which, when completed, is expected to divert approximately 2,400 tons of material per year. No new target completion date has been set for the facility.

The Department has not yet implemented a commercial waste audit program due to a current lack of staff able to perform the service. However, the Department found that some haulers have already implemented similar services to their large customers. This service is provided whenever the hauler notes that a customer is disposing of a large amount of material which could be taken to a recycling location. This program has been very effective in identifying commercial materials which are easily segregated and recycled. In addition, the Department works with commercial generators on an item-by-item basis. The Department recently filled an existing vacancy which will provide the staff necessary to implement this program more comprehensively. It is anticipated that the program will become available in early 2002.

The Department has begun implementation of the Recycling Trailer Program outlined in last years report. This program provides small recycling trailers to schools, churches, and community groups who wish to operate recycling programs but lack the equipment necessary to do so. This program is designed to provide both the equipment and education needed to allow these groups to tailor these programs to fit their individual needs. While it is understood that the program will not produce large amounts of recycled material, it does provide a necessary educational component and is designed to operate at a zero cost to the Department once the equipment is purchased.

YEAR 2000 RESULTS

The Department reached the 50% diversion requirement for the unincorporated County in 1999. This rate has been increased to 52% for the year 2000. This fulfills the goal set by your Board for the Director of Waste Management to achieve a 50% diversion rate by the year 2000.

The diversion rate for the County is determined by calculating the total amount of waste generated in the unincorporated area and then subtracting out the amount of the waste actually disposed. This

method is required by the State to determine the amount of diversion which will be used to determine compliance with AB 939. The results of this calculation is shown in the table below:

ANNUAL DIVERSION RATES FOR THE UNINCORPORATED COUNTY			
	1999 (Final)	***2000 (Final)***	**% Change**
Waste Generation	573,499	*589,664*	+2.8%
Disposal Tonnage	286,292	*281,153*	-1.7%
Diversion Tonnage	287,207	*308,511*	+7.4%
Diversion Rate	51.08%	52%	+1.02

STATUS OF INCORPORATED CITIES IN KERN COUNTY

The Cities within Kern County also report their diversion results to the California Integrated Waste Management Board. The calculations are done by the Cities in a similar manner and their results are then reported to the Waste Board. The results for the Cities in Kern County are as follows.

Kern Cities Diversion Results 2001	
City	Diversion %
Arvin	28
Bakersfield	39
California City	62
Delano	36
Maricopa	62
McFarland	34
Ridgecrest	55
Shafter	70
Taft	67
Tehachapi	85
Wasco	58

STATUS OF COUNTIES IN CALIFORNIA

CALIFORNIA COUNTIES DIVERSION RESULTS 2000			
County	**%**	**County**	**%**
Imperial	88	San Bernardino	43
Humbolt	75	San Joaquin	43
Alpine	66	Contra Costa	42
Alameda	65	Tulare	42
Trinity	61	Plumas	41
Shasta	61	Sonoma	40
Stanislaus	59	Orange	40
Lassen	57	Yolo	37
Mono	56	El Dorado	36
Santa Clara	54	Napa	35
Kern	52	Lake	33
San Luis Obispo	52	Sacramento	32
Amador	51	San Francisco	32
Marin	50	Yuba/Sutter	31
Siskiyou	49	Monterey	31
Kings	49	Fresno	31
Riverside	48	San Mateo	30
Tuolumne	46	Los Angeles	30
Tehama	46	Butte	30
Merced	46	Inyo	29
Del Norte	46	Ventura	29
Solano	44	Calaveras	29
San Diego	44	Mariposa	24
Placer	43	San Benito	20
Santa Barbara	43	Santa Cruz	18
Madera	43	Mendocino	15
Nevada	43	Modoc	14
		Sierra	13

SUMMARY

The Department has met its goal of providing the County with the diversion levels mandated under AB 939 but recognizes it cannot rest on its laurels if we are to maintain this level. The municipal solid waste stream is dynamic and measurement systems have limited accuracy. There is also a potential for the current diversion rate to drop significantly depending on the outcome of the jurisdictional disposal reporting dispute with the City of Bakersfield. For these reasons, the Department intends to continue increasing the diversion amounts through enhancements to current programs and development of new programs. In addition, the Department is researching other options which could be implemented to increase the diversion rate significantly beyond the 50% mark. These options are being evaluated and are addressed in a separate report to be considered by the Board of Supervisors.

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ATTACHMENT 1

Source Reduction and Recycling Element Program Listing

Program Name

Xeriscaping/Grasscycling

Backyard and On-Site Composting/Mulching

Business Waste Reduction Program (Awards Program)

Procurement (Price preference for recycled products)

Government Source Reduction Programs (Paper reduction programs)

Residential Drop-Off

Residential Buy-Back

Commercial On-Site Pickup
- Carecycling
- Private Services

Residential Self-haul Greenwaste
- County Landfill & TS programs
- Bakersfield Mt. Vernon Facility

Commercial Self-Haul Greenwaste
- County Landfill & TS programs
- Bakersfield Mt. Vernon Facility

Residential Curbside Greenwaste Collection

Tires

White Goods

Scrap Metal

Wood Waste

Concrete/Asphalt/Rubble

Electronic (radio, TV, web, hotlines)

Print (brochures, flyers, guides, news articles)

Outreach (tech assistance, presentations, awards, fairs, field trips)

Schools (education and curriculum)

Product and Landfill Bans
- White Goods
- Tires
- Household Hazardous Waste

Economic Incentives
- Gate Fees
- Source Separated Discounts

Ordinances
- Gate Fees

Material Recovery Facility
- Tehachapi Recycling

Landfill
- Various Recycling Programs

Transfer Station
- Various Recycling Programs

Composting Facility
- Bakersfield Mt. Vernon Facility

Alternative Daily Cover (Program Currently Inactive)

Mobile or Periodic Collection

Education Programs

Special Collection Seasonal (regular)
- Christmas Trees
- Phone Books

Special Collection Events
- Bulky Waste

Permanent Hazardous Waste Facility

SOLID WASTE DIVERSION STATUS REPORT

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I. INTRODUCTION

The Waste Management Department annually submits a report to the Board of Supervisors updating the status of solid waste diversion in Kern County. This report includes the following:

- Level of compliance with the Source Reduction and Recycling Element (SRRE) and the 50 percent diversion mandate established by the Integrated Waste Management Act of 1989 (AB 939).
- Summary of diversion activities operated by the Department or in which the Department participates.
- Analysis of the waste disposal data that is used to develop the diversion percentage.
- Plans for future diversion activities.
- 2001 diversion rates for the cities in Kern County and other counties in the State.

The Department is proud to announce that the California Integrated Waste Management Board **officially approved a diversion rate of 51 percent for the year 2000** for unincorporated Kern County at its August Board Meeting. The action included the finding that the County is in conformance with its Source Reduction and Recycling Element.

It should be noted that the 51 percent diversion rate approved by the Waste Board is slightly less than the 52 percent estimated by the Department in last year's Diversion Report. The downward adjustment was the result of our continuous effort to improve the accuracy of our disposal reporting per jurisdiction. The Department has worked closely with the City of Bakersfield and the metropolitan area franchise haulers to improve the waste volume data that is used to calculate the disposal tonnage for Bakersfield and the County unincorporated area. This effort has been very successful in that all parties agree that data currently submitted is much more accurate than what was submitted in the year 2000. The Department concluded that, after working with all the available data, a more accurate calculation of disposal tonnages for Bakersfield and County unincorporated area could be made for the year 2000. The Department agreed to report the adjustment to the State because of its importance to the City of Bakersfield. While the adjustment served to decrease the County unincorporated diversion rate, it increased Bakersfield's by approximately two percent.

A caution was included in last year's report that many of the factors responsible for the successful diversion rate are out of the direct control of the Department and, therefore, the Department would continue to search for cost effective ways to increase diversion. The data accuracy issue just described is an example of just such a factor. In addition, disposal for the County unincorporated area jumped significantly beyond our projections in the year 2001 despite an increase in diversion from the programs that the Department tracks. **The estimated diversion rate for the County unincorporated area for the year 2001 is 50 percent.**

II. SOURCE REDUCTION & RECYCLING ELEMENT

Kern County outlined the strategy to comply with the requirements of the Integrated Waste Management Act of 1989 (more commonly known as AB 939) in its Source Reduction and Recycling Element approved by the Board of Supervisors on October 22, 1992 and accepted by the California Integrated Waste Management Board on January 24, 1995. This document identified 35 separate programs which would be evaluated or implemented in order to increase the overall level of recycling in Kern County.

Programs listed in the SRRE include recycling education campaigns, enactment of economic incentives such as gate fees at Kern County Solid Waste Facilities, implementation of procurement policies designed to reward companies using recycled content in their products, physical diversion programs such as wood, metal, and tire recycling, and support of programs operated by private recycling companies who do business in Kern County. A complete listing of the programs included in the SRRE is included with this report as Attachment 1, all of which are actively being implemented by this Department.

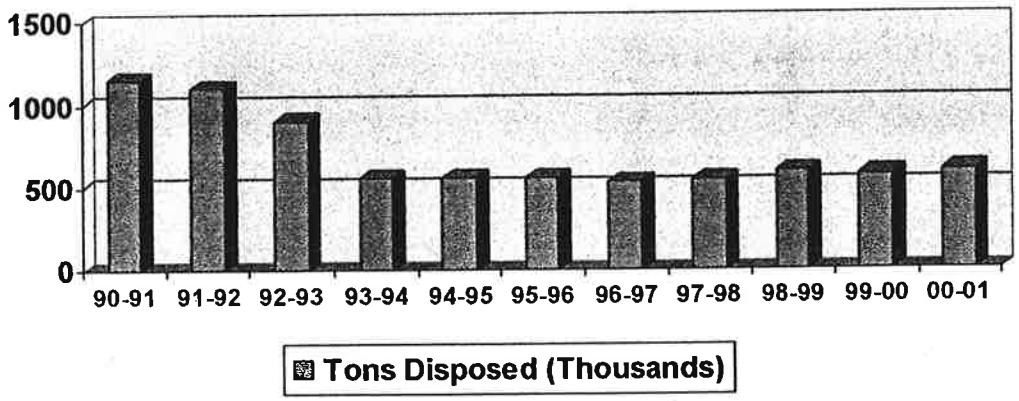
The results of programs listed in the SRRE which are either solely operated by the Department, or which the Department is involved in operating, and produce a tangible amount of diversion are discussed in more detail in this report.

III. STATUS OF COUNTY PROGRAMS

A. Gate Fee

In July of 1993, the Department instituted a gate fee system for commercial waste and construction and demolition material. This change in how fees were collected for landfill use provided an economic incentive to businesses to find alternate ways to handle their waste. Many commercial generators began recycling and diversion programs to minimize the amount of waste they were sending to the landfill. The vast majority of the recycling came from the construction and demolition industries. The result of these actions was a marked decrease in the amount of waste coming into Kern County facilities as shown in the chart below.

Waste Disposal By Fiscal Year



B. Other County Programs

In 2001, the Department continued to operate the various diversion programs at the solid waste facilities which were in place in previous years. These programs were enhanced as outlined in previous reports in order to maximize the amount of diversion each program was obtaining. The results for these programs are shown in the subsequent tables.

DIVERSION PROGRAMS RESULTS - Tons Diverted				
Program	**1998**	**1999**	**2000**	**2001**
County Wood	16,625	20,342	22,334	20,378
Inerts	10,810	12,493	18,952	16,194
Tires	1,715	2,010	1,624	1,778
Scrap Metal; White Goods	2,259	2,979	3,052	3,801
County Drop Offs	301	426	488	658
TOTAL	**31,710**	**38,250**	**46,450**	**42,809**

The programs listed above show increases in the tonnage of tires, scrap metal/white goods, and drop off material recycled. Decreases were seen in the tonnage of wood and inerts processed at the County landfills. The decrease in the wood program is due primarily to being more selective in what material was accepted in the program for grinding because of the Delano Energy acceptance criteria. Delano Energy is the cogeneration facility that currently serves as the end market for this program.

The decrease in the inert tonnage is due to a number of County operated landfills having large enough stockpiles of inert material for facility maintenance. This resulted in the Department stopping the free inert program at those facilities. Once the free inert program was stopped at those facilities, the inert material, in most cases, was still diverted by private enterprise.

The Department continuously tracks program cost effectiveness. The cost per recycled ton for 2001 for each program in this section is detailed in the table below:

PROGRAM COST PER TON - 2001					
Program	**Tonnage**	**Admin Cost**	**Contract Cost**	**Revenue**	**Cost Per Ton**
Wood	20,378	$8,696	$254,590	$ 0	$12.92
Inerts	16,194	$73	$ 0	$ 0	$ 0
Tires	1,778	$78,335	$138,126	$165,511	$28.67
Scrap Metal, White Goods	3,801	$32,891	$99,599	$92,546	$10.50
Drop Off	658	$7,983	$65,885	$2,239	$108.86
TOTAL	**42,809**	**$127,978**	**$558,200**	**$260,296**	**$9.94**

All the programs are cost effective when compared to alternatives. Some of the programs have increased over time as illustrated in the table below:

DIVERSION PROGRAMS RESULTS Cost Per Recycled Ton				
Program	**1998**	**1999**	**2000**	**2001**
County Wood	$5.62	$7.70	$12.46	$12.92
Inerts	$ 0	$ 0	$ 0	$ 0
Tires	$2.11	<$1.03>	<$6.30>	$28.67
Scrap Metal, White Goods	<$10.76>	<$5.75>	$27.06	$10.50
County Drop Offs	$181.69	$152.58	$134.01	$108.86

The wood program went out to competitive bid in 2000. The cost of the program increased primarily due to less money being paid for the end product. This program is still substantially less costly than composting ($20 - $30 per recycled ton). There are other end markets for ground wood material but none that actually pay for the product as the current program does.

In general, the Department has worked to make the tire program more cost effective every year. The spike in 2001 is due to the fact that we handled a backlog of very large heavy equipment tires. This program is necessary because the State has banned disposal of whole tires in landfills. This is a competitively bid program and is less costly than the alternative of shredding the tires for disposal in the landfill. The figures in the table include the revenue from the $1.00 per tire charge.

The variance in the cost per recycled ton for the Scrap Metal/White Goods Program is directly attributable to the price paid for the scrap material.

The drop-off program has shown steady improvement each year. This is attributable to more public participation each year. It is still a relatively expensive program but it is less expensive than the alternative program curbside recycling, which typically runs $120 - $180 per recycled ton.

C. Green Waste Diversion

The largest single diversion tonnage increase for Kern County was due to the implementation of the curbside green waste collection program implemented in the unincorporated Metropolitan Bakersfield area. The estimate projected diverting 15,000 tons of material in 2001, but actual results exceeded that estimate by almost 6,000 tons.

CITY OF BAKERSFIELD - MT. VERNON FACILITY				
Program	**1998**	**1999**	**2000**	**2001**
COB Green Waste Self Haul Material	22,703	20,926	17,492	16,747
COB Green Waste Curbside Collection	N/A	N/A	11,099	20,963
TOTAL	**22,703**	**20,926**	**28,591**	**37,710**

The County utilizes the City of Bakersfield Mt. Vernon compost facility to process material diverted through the curbside collection program. The cost of utilizing this facility is provided to the County by the City of Bakersfield. That cost is calculated by taking the total operating cost of the facility, subtracting any revenue received by the City from the sale of finished material, and proportioning the resulting net cost between the City and the County. The proportion is based on the amount of inbound tonnage received from either County or City residents.

CITY OF BAKERSFIELD - MT. VERNON FACILITY 2001				
Program	**Tonnage**	**Admin Cost**	**Net Contract Cost**	**Cost Per Ton**
Green Waste	37,619	$13,070	$790,122	$21.00

D. Tehachapi MRF

The Tehachapi Material Recovery Facility continued to provide diversion for the County, the City of Tehachapi, and California City. During the year 2001, the facility diverted 20,891 tons of mixed municipal waste. The breakdown on the diversion of the mixed municipal waste is as shown in the table below.

TEHACHAPI MRF		
Jurisdiction	**Tons Diverted 2000**	**Tons Diverted 2001**
County of Kern	12,402	14,838
City of Tehachapi	5,512	3,660
City of California City	3,000	2,527

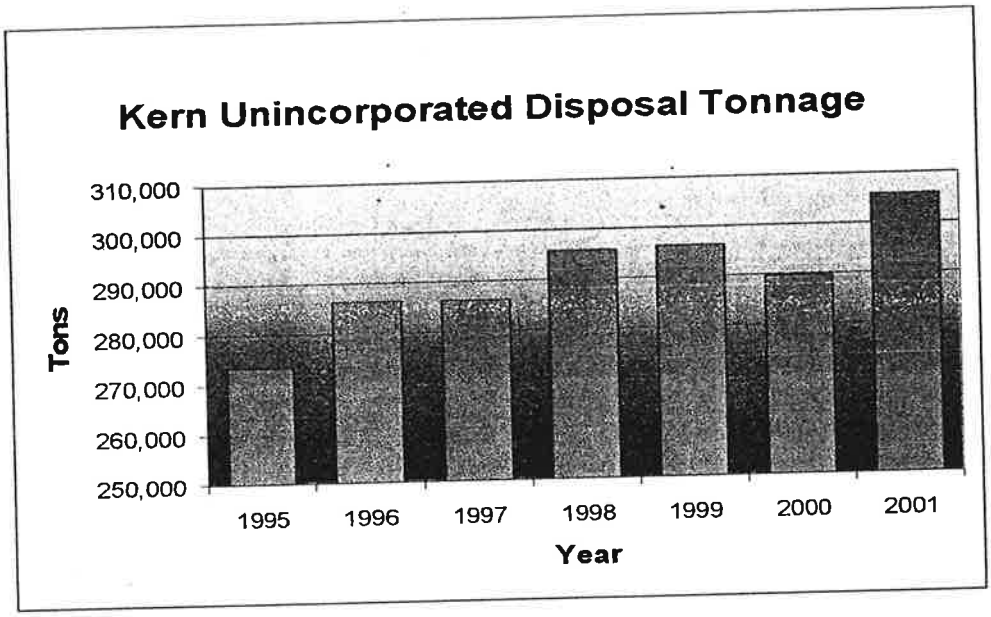
In summary, the diversion programs operated solely, or in part, by the County of Kern had a relatively successful year. The total diversion for all programs showed an increase of almost 8,000 tons of material. The bulk of these increases were seen mainly in the green waste program and in the amount of un-incorporated diversion generated at the Tehachapi

Material Recovery Facility. These increases more than offset the tonnage decreases tracked in the inert and wood programs operated at the various landfills.

IV. DISPOSAL UPDATE

A. Reasons For Disposal Tonnage Increase In 2001

Kern Unincorporated disposal tonnage increased approximately 18,000 tons between year 2000 and 2001. This represents a largest percentage increase in disposal since 1996. The chart below displays the increasing trend of disposal over the past seven years.



The Department had projected 2.07 percent growth in 2001 which equates to an increase of 5,800 tons. Our projection models are based on the population growth factors available from Kern COG, however given the ever changing profile of the solid waste stream and non-linear growth, it is very difficult to pin point disposal from year to year. In explaining the reasons for the disposal increase, we have both definitive and speculative results. The following results of our investigation are in order of certainty:

1. Demolition Project on Edwards Air Force Base:
Impact: Net increase 4,400 tons

In 2001 a large demolition project was conducted at the Edwards Air Force base that generated a significant amount of residual tonnage. Even though 73 percent of the total demolition project was diverted, the project scale was so large that it generated 5,500 tons of residual that was disposed in the Lancaster Landfill. This disposal is allocated to Kern County even though Lancaster Landfill is in Los Angeles County because disposal accounting tracks jurisdiction of generation. The project increased Kern Unincorporated tonnage for out-of-county disposal by 4,400 tons over year 2000.

2. Private Landfill Disposal Increase (Valley Tree):
Impact: Net increase 3,500 tons

In 2001, the market for recycled wood waste used to fuel co-generation energy plants boilers closed for many suppliers due to California's purchase of out-of-state power. The local co-generation plant in Delano suspended purchasing urban source material thus forcing some recyclers to modify their wood recycling programs. Suspension of the market caused the private landfill owned by Valley Tree Disposal to modify their operation to bury wood waste instead of diverting to co-generation plants. This increased disposal tonnage by 3,500 tons over year 2000.

It is likely that the wood powered co-generation reduction impacted more than just this one recycler. A review of landfill tonnage records revealed that 14,500 more tons were classified under the demolition family of material types and mixed demolition was up 9,400 tons at the metro landfills. In 2001, 1,200 less demolition classified loads were denoted as source separated or discrete wood/concrete/asphalt loads. This may point to a change in field operations of not separating wood from the demolition and construction waste stream which may have been caused by the suspension of the urban market.

3. Metro Disposal Reporting Methodology Modification
Impact: Net increase of 1,400 tons

The metro disposal accounting method was modified during the third and fourth quarters of 2000. The third quarter change would create an approximate increase of 1,000 tons per quarter in Kern Unincorporated tonnage. The modification in the fourth quarter shifted approximately 200 tons from Kern Unincorporated to the City of Bakersfield so a net change of 800 tons per quarter was in place after the third quarter of 2000. Considering the 3,200 ton increase over the four quarters in 2001 and subtracting the 1,800 tons accounting for year 2000 modifications, a net increase of approximately 1,400 tons was obtained for year 2001 disposal.

4. Franchise Hauling in the Metro Area
Impact: Approximately 7,200 tons

Beginning in late 2000, thousands of Kern Unincorporated residences were phased into mandatory collection services. Waste delivered by franchise and city haulers was expected to increase and we also projected a comparable decrease in self-hauled disposal brought to metro landfills by standard vehicles (pick ups, cars and vehicles with small trailers). Another factor contributing to the increase of Franchise and City hauling was the outstanding growth of Kern County in 2001. According to the latest census numbers, the Kern County population increased approximately 14,700 in 2001. If we use the approximation of 40 percent of the residents of Kern County reside in the unincorporated area, this would equate to approximately 5,900 new Kern Unincorporated residents that would produce approximately 5,000 – 6,000 tons

of Kern Unincorporated solid waste on an annual basis. To further highlight growth, 4,260 more loads of solid waste were hauled by Franchise and City Haulers in 2001 in the metropolitan area.

Franchise and City Hauler tonnage increased 10,800 tons in the metro area but standard vehicle tonnage decreased only 3,600 tons. The resulting net tonnage of approximately 7,200 exceeded our expectations because the decrease in self hauled tonnages did not effectively offset franchise hauled packer waste.

B. Jurisdictional Reporting Modifications

In late 2001 and early this year, Kern County Waste Management in conjunction with the Kern Refuse/Zone 2 haulers and the City of Bakersfield reviewed hauling service records and accounting systems to verify the level of services reported to the County for the purposes of fee accounting and jurisdictional disposal. The review found errors in the levels of service being reported, thus initiating a correction of year 2000 disposal accounting. In general, the Kern Unincorporated area had a higher level of service than previously reported which increased Kern Unincorporated disposal by 8,500 tons in 2000.

Reporting was somewhat improved in 2001, however, it is projected that approximately 5,000 additional tons may be counted for Kern Unincorporated disposal in 2001 due to the correction of service. This would bring the total increase in disposal for 2001 to 23,000 tons.

V. ESTIMATED 2001 DIVERSION PERCENTAGE

Given the increased disposal in the Kern Unincorporated area, the estimated diversion rate has decreased to 50 percent from the year 2000 corrected diversion rate of 51 percent. As discussed in the opening summary, the year 2000 diversion rate was adjusted down from 52 percent to 51 percent as a result of our continuous effort to improve the accuracy of our disposal reporting per jurisdiction. The year 2001 diversion rate is estimated at this time because not all of the economic data is currently available to enter into the California Integrated Waste Management Board's algorithm that computes diversion rates. The table below shows the diversion rate for the last few years.

ANNUAL DIVERSION RATES - UNINCORPORATED COUNTY			
	1999 (Final)	**2000 (Final)**	**2001 (Estimate)**
Waste Generation	573,499	589,664	625,665
Disposal Tonnage	296,411	289,499	312,800
Diversion Tonnage	277,088	300,165	312,865
Diversion Rate	**48%**	**51%**	**50%**

One may ask why it is estimated that the 2001 diversion rate will only decrease one percent when disposal is up significantly. We generally use the estimate factor of 6,000 which equates to approximately one percent in diversion rate. If we take the 10,000 ton increase in diversion reported from current programs and the increased disposal of 18,000, the net disposal tonnage is approximately 8,000 tons which would lower the

diversion rate by one to two percent considering rounding. We must also consider the pending additional 2001 Kern Unincorporated disposal tonnage of 5,000 tons that can lower the diversion rate another one percent. This may appear to lower the diversion rate to 48 percent or 49 percent, but we must also consider another mitigating factor, the growth allowance built into the California Integrated Waste Management's diversion rate formula. The formula used to derive diversion rates considers factors such as taxable sales, population growth and the Consumer Price Index as a means of accounting for disposal increases. If the formula didn't account for this, we would have to recycle 100 percent from new homes and businesses just to keep our diversion rate constant. So, in effect, the formula recognizes that some of the increase in disposal was due to normal growth which keeps it from unduly lowering our diversion rate. Therefore, the net result is only a one percent decrease.

VI. DEPARTMENT'S PLANS FOR MAINTAINING 50% DIVERSION

A. Status of Programs under Development from Last Year

The 2001 Diversion Report listed diversion programs that were under development to bolster the County's diversion percentage. The following is an update on their progress:

1. Metropolitan Recovery Corporation (MRC)/City of Bakersfield Construction and Demolition Debris Recovery Facility

The Zone 2 Franchise Haulers are required to develop a construction/demolition (C&D) debris recycling facility in the metropolitan Bakersfield area per the terms of their recent franchise contracts. They formed the Metropolitan Recovery Corporation and partnered with the City of Bakersfield to construct the facility at the Mt. Vernon Green Waste Composting site. The facility officially began operations in January 2002. Mixed C&D is collected at the facility, loaded into transfer trailers and transported to a recycling facility in Sun Valley owned by Crown Disposal. So far, the haulers are only handling their own C&D collections. They received approximately 5,000 tons in the first six months and approximately 4,000 tons were recycled. They expect to receive higher volumes as they gain experience with the operation.

2. Westside Waste Management Selected Material Recovery Facility

Westside Waste Management, Inc. also is contractually obligated to the County to develop and operate a recycling facility. They have successfully sited a buy-back center and drop-off facility at their yard in Taft. However, they are still working on finding a suitable site for the Selected Material Recovery Facility. The Department has just started working with them on locating the facility at the Taft Sanitary Landfill. There are many advantages to the County, hauler and, potentially, customers if this arrangement can be worked out. This facility would receive mostly mixed loads of C&D, which would be segregated into individual recyclable materials on site and then transported elsewhere for final processing. The facility would have the capacity to accept loads high in recyclables other than C&D. Westside Waste Management is expecting to recycle as much as 200 tons

per month once the facility is fully operational. In the meantime, they have been active recycling what they can through segregated collection from their customers.

3. Commercial Recycling

The Department has just starting working with some of the haulers in the Bakersfield metropolitan area to explore the possibility of establishing separate recycling routes. This would be an extension of the commercial recycling the haulers already have activated. Current commercial recycling in the County unincorporated area is limited to working with individual, large generators. The intent of this program is to target groups of smaller businesses for separate collection of recyclable materials such as cardboard or paper.

B. New Programs under Development

At this time last year, it was expected that the above programs, along with advancements in the existing programs, would provide the County with a sizable cushion above the 50 percent diversion mandate. In light of the diversion results for 2001, the Department has started development of additional programs.

1. Green Waste Diversion Program at the Shafter-Wasco Sanitary Landfill

The Department is working on a fast-track basis to start diverting green waste from the Shafter-Wasco Sanitary Landfill. The Shafter-Wasco Landfill is the fastest growing landfill in the system because of growth north and west of Bakersfield. Residents and haulers in these areas have found it more cost effective to use the Shafter-Wasco Landfill than the Bena Landfill. This also means that there is less use of the City of Bakersfield Green Waste Composting Facility from these areas. Gate attendant records and visual observations indicate that there is 5,000 to 10,000 tons of recyclable green waste being disposed at the Shafter-Wasco Landfill each year and that amount will grow in proportion to growth in the west and north Bakersfield metropolitan areas. A recycling program at the Shafter-Wasco Landfill will also be able to serve the cities in north Kern County.

The pilot program will simply divert customer loads with green waste to a designated area of the landfill where it will be loaded into containers for transport to an off-site composting facility. The Department does not plan to include any special sorting procedures in an effort to keep costs down. This means customer loads will have to contain almost entirely recyclable green waste to be accepted into the program.

Customer loads generated from residential properties will be accepting into the program free. Customer loads generated from non-residential properties will be charged one-half the disposal gate fee as an incentive measure.

2. Charge for Disposal of Recyclable Green Waste Program

The Department is proposing to charge for the disposal of all recyclable green waste in the Bakersfield metropolitan area shortly after the Shafter-Wasco Landfill Green Waste Recycling Program is up and running. This program is considered an appropriate and necessary step by the Department to maximize cost effective recycling. There is currently a great deal of recyclable green waste being disposed at Bena Landfill despite a very accessible recycling facility that is actually closer for most of the customers. Many customers are bypassing the Mt. Vernon Facility because they won't accept the minor inconvenience of keeping green waste loads free of program contaminants. Establishing a charge for the disposal of recyclable green waste will provide the necessary incentive to recycle. The Shafter-Wasco Landfill Program, the existing City of Bakersfield Green Waste Composting Facility at Mt. Vernon and separate collection of green waste programs available to most residents in the metropolitan area provides the public in the Bakersfield metropolitan area with reasonably accessible recycling opportunities that allow them to avoid the disposal charges. Because the recycling options are only offered in the metropolitan area at this time, the disposal charges will only take effect at the Bena, Arvin and Shafter-Wasco Sanitary Landfills. The Department estimates that as much as 23,000 tons of additional green waste can be recycled with this program, of which 12,000 tons would be from the unincorporated area.

There are many issues associated with this program concept that the Board needs to be aware of and consider.

Green waste generated at a residential property has historically been covered by the Land Use Fee; therefore, there is no charge at the landfill for disposal. This would no longer be the case under the Department's proposal. If the residential green waste is not properly segregated for recycling and has to go to disposal, then it would be charged. This also means, potentially, that normal household waste could be charged if that is the waste with which the recyclable green waste is co-mingled.

Charges would be enforced at the three metropolitan area landfills (Arvin, Bena and Shafter-Wasco). The Mt. Vernon Facility would be expected to serve Lamont and the City of Arvin.

To the extent that the Mt. Vernon Facility is not located at a landfill, there is an inconvenience to the customer if they are rejected because of load contamination. By contrast, if this occurs at the Shafter-Wasco Landfill, the inconvenience is minimal because the disposal area is on the same site.

Educating the public on what is recyclable green waste will be a challenge. Although it should be easy to understand non-green waste contaminants (such as plastic, metal and paper), understanding that some forms of green waste are actually contaminants (such as yucca, bamboo and oleander) will be much more difficult.

The Department seeks approval from the Board to continue with the steps necessary to implement this program because it involves a change in policy and requires an ordinance revision. The ordinance revision will be brought at a later date if the concept is approved by your Board.

3. Cathode Ray Tube Recycling Programs

New regulations have forced the Department to initiate programs to control the cathode ray tube waste stream. Cathode Ray Tubes (CRTs) are the picture tubes that are found in computer monitors, television sets, cellular phones and diagnostic instrumentation. CRTs can no longer be buried in Class III municipal landfills due to their hazardous characteristic levels for lead. CRTs have been classified as Universal Wastes by the Department of Toxics Substance Control to ease the restrictions of storage and transportation of this otherwise hazardous waste and to facilitate recycling efforts. In response to the requirements of the State and the residents of Kern County, the Department has been operating a pilot CRT recycling program for the past 7 months. The program has operated well but CRT recycling is very costly with computer monitors costing $8.00 – $10.00 each and televisions costing up to $30.00 each. The cost to the Department for this pilot period has been $70,000. The Department is now in the process of developing new programs to handle the residential and commercial CRT waste streams. In order to provide CRT handling services, the Department will recommend a change to the gate fee ordinance to include a schedule of service fees.

County-Wide CRT Program

The county-wide CRT program policy is proposed to accept one CRT per residential load at no charge with subsequent CRTs within the load charged according to the fee schedule. Not charging for the one CRT addresses services for residential disposal of televisions or computer monitors that were previously considered household waste and deter illegal dumping which was evidenced prior to the start of the Pilot CRT Collection Program. Unlimited numbers of CRTs will be accepted within loads and all non-residential loads will be charged. The schedule of fees will be based on the number and size of CRTs or by bulk weight and will be in cost range previously noted. All Department landfills and transfer stations will be included in the program.

CRTs will be collected and stockpiled in a regulatory compliant manner then periodically loaded into bins for transport to a processing facility. The metal, plastic and glass that make up a CRT and its enclosure will be recycled. It may also be possible that some CRTs will be properly disposed of into Class I hazardous waste facilities. The objectives of this program are to provide residents and small business a cost effective way of dealing with the occasional disposal of CRTs and to operate in an environmentally-sensitive, regulatory compliant and cost effective manner.

Commercial Electronics Program

The Commercial CRT Program which will be partially funded through a grant from the California Integrated Waste Management Board is modeled to have CRTs and other electronic materials collected from large commercial businesses through periodic collections. Businesses would be charged for electronic material handling charges based on the number and/or weight of each electronic component. Even though services are charged, businesses will receive tax donation benefits and can bring in large loads of material at one time. The schedule of fees for this program is different than the County-Wide program because of grant funding and additional electronic materials are accepted.

The Department will coordinate receipt, temporary storage and transportation of electronic material from County landfills. Material will be transported to the California Women's Correctional Institution in Stockton, California, for processing that will include: (1) material refurbishing for resale or donation, (2) dismantling for component parts, or (3) recycling for the metals, plastic and glass.

The goal of the program is to provide large waste CRT generators a cost effective, regulatory proper way to deal with their waste CRT's while reducing the strain on the more expensive county-wide CRT Recycling Program.

The expected diversion tonnage from each program is unknown at this time. These programs are necessary from a waste management perspective, not so much from a landfill diversion perspective. We estimate only 240 tons per year will be diverted given the tonnages handled through the pilot program.

The Department seeks approval from the Board to continue with the steps necessary to implement this program because it involves a policy determination and requires an ordinance change. The schedule of fees will be part of an ordinance revision that will be brought at a later date if this concept is approved by your Board.

4. Construction & Demolition Recovery Programs

Recycling of construction and demolition (C&D) materials has always been a focus by the Department. We find source-separated programs appear to be reaching their maximum and yet a significant amount of mixed C&D loads continue to come to the landfills for disposal. The Tehachapi MRF and MRC facility provide good examples of mixed C&D processing and recycling. The Westside Waste Management Facility at the Taft Landfill will provide us experience with C&D recycling at a disposal site. We anticipate this being an effective arrangement. Therefore, the Department is evaluating the potential for additional mixed C&D recycling at other landfills.

5. Curbside Recycling

The Department has periodically analyzed and evaluated the potential of residential curbside recycling. It has always been determined that the cost was too great for the projected additional diversion. The Department is currently monitoring the City of Bakersfield pilot curbside recycling program and how the City plans to proceed after the pilot period is completed. If a cost effective program is proposed as a result of the pilot program the Department may recommend the program be included in the unincorporated area at some time in the future

VII. FUTURE DIVERSION PROJECTIONS

The previous two years have had significant tonnage corrections due to the modifications of the Metro Jurisdictional Method and correction of services offered by Franchise and City haulers. The metro disposal methodology has sufficiently evolved to the point where any changes to the algorithms will not result in huge swings of tonnages. Only minor changes in hauler reporting are expected in 2002 and the continued tuning of the metropolitan disposal accounting method should not cause any significant allocation of tonnage in the future.

For projection purposes, we assume disposal tonnage and diversion tonnages processed within our current programs to increase proportionate with the growth of the County's population and economy. Given that increases in growth are effectively accommodated for in the jurisdictional diversion rate formula and our diversion tonnages are closely tied to growth, a net increase in diversion rate must be achieved by incorporating new diversion programs.

Many new programs are coming on line at the end of 2002 and the beginning of 2003. The new diversion program of significance operating in 2002 is the Metropolitan Recovery Corporation (MRC)/City of Bakersfield Construction and Demolition Debris Recovery Facility which opened in April of 2002. The Green Waste Diversion Program at the Shafter-Wasco Sanitary Landfill will be in operation in the fourth quarter of 2002. All other new diversion programs will begin operations in 2003. Two new programs of note that are identified in the following table are the Commercial Recycling Program and the additional Construction and Demolition Recovery Programs. Expected diversion from these programs should be significant but it is too early to report projected tonnages.

The following table summarizes our projections. We believe the projections to be conservatively low and that if the programs achieve their full potential, the resulting diversion rates will be even higher.

FUTURE DIVERSION PROJECTIONS				
Program	**Overall Program Diversion (Tons per Year)**	**Estimated Kern Uninc. Diverted Tons in 2002**	**Estimated Kern Uninc. Diverted Tons in 2003**	**Estimated Kern Uninc. Diverted Tons in 2004**
Metropolitan Recovery Corporation (MRC)/City of Bakersfield Construction and Demolition Debris Recovery Facility	14,400	1,900	3,000	3,000
Westside Waste Management Selected Material Recovery Facility	2,600	0	2,100	2,100
Green Waste Diversion Program at the Shafter-Wasco Sanitary Landfill	5,100	560	2,200	2,200
Charge for Disposal of Recyclable Green Waste Program	23,000	0	6,000	12,000
Commercial Recycling	Estimates not available at this time			
Other C&D Recovery Programs	Estimates not available at this time.			
Est. Diversion Rate		**50%**	**52%**	**53%**

VIII. STATUS OF INCORPORATED CITIES IN KERN COUNTY

Data for 2001 is not yet available from the State.

IX. STATUS OF COUNTIES IN CALIFORNIA

Data for 2001 is not yet available from the State.

X. SUMMARY

Kern County continues to meet the diversion mandate of 50 percent diversion for the unincorporated area. The diversion programs that the Department operates or participates in continue to perform well. Despite the increase in diversion from Department programs, the 2001 diversion rate slipped slightly from the previous year, from 51 percent to

50 percent. This can most likely be attributed to reduced markets for recycled wood, a spike in large construction and demolition projects, a delay in implementation of new diversion programs and revised collection account data in the metro-Bakersfield area.

The Department has already taken some steps toward the development and implementation of new diversion programs to counter the slide we've experienced. Board approval and ordinance revisions are necessary for two of the proposed programs: (1) charging for the Disposal of Recyclable Green Waste, and (2) Cathode Ray Tube Recycling. One of the delayed programs is already up and running, and others are nearing start-up. Successful implementation of the programs outlined in this Report is estimated to boost the Department's diversion rate up to 53 percent.

I:\CLERICAL\REPORTS\Operations\2002 Diversion Report.doc

ATTACHMENT 1

Source Reduction and Recycling Element (SRRE)
Active Program Listing

PROGRAM NAME

Xeriscaping/Grasscycling

Backyard and On-Site Composting/Mulching

Business Waste Reduction Program (Awards Program)

Procurement (Price preference for recycled products)

Government Source Reduction Programs (Paper reduction programs)

Residential Drop-Off

Residential Buy-Back

Commercial On-Site Pickup
- Carecycling
- Private Services

Residential Self-haul Green waste
- County Landfill & TS programs
- Bakersfield Mt. Vernon Facility

Commercial Self-Haul Green Waste
- County Landfill & TS programs
- Bakersfield Mt. Vernon Facility

Residential Curbside Green Waste Collection

Tires

White Goods

Scrap Metal

Wood Waste

Concrete/Asphalt/Rubble

Electronic (radio, TV, web, hotlines)

ATTACHMENT 1

Print (brochures, flyers, guides, news articles)

Outreach (tech assistance, presentations, awards, fairs, field trips)

Schools (education and curriculum)

Product and Landfill Bans
- White Goods
- Tires
- Household Hazardous Waste

Economic Incentives
- Gate Fees
- Source Separated Discounts

Ordinances
- Gate Fees

Material Recovery Facility
- Tehachapi Recycling

Landfill
- Various Recycling Programs

Transfer Station
- Various Recycling Programs

Composting Facility
- Bakersfield Mt. Vernon Facility

Alternative Daily Cover (Inactive)

Mobile or Periodic Collection

Education Programs

Special Collection Seasonal (regular)
- Christmas Trees
- Phone Books

Special Collection Events
- Bulky Waste

Permanent Hazardous Waste Facility

SOLID WASTE DIVERSION STATUS REPORT

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2700 "M" Street, Suite 500
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November, 2004

Printed on Recycled Paper

EXECUTIVE SUMMARY

The diversion rate for the unincorporated portion of Kern County remains above the 50% level as legislated by AB 939. The programs operated by the Department continue to perform well with tonnage increases being seen in all but two of the monitored programs. Programs operated by other entities under contract with the County are also performing well and, overall, diversion from these programs has increased. These tonnage increases are needed to keep up with the higher disposal tonnages seen due to the population growth spurt occurring within the County. In fact, at least part of the increase in diversion is due to the increased population base. This would indicate that just maintaining the existing programs will keep us above the 50% threshold but the Department has plans for program enhancements and new programs that should push our diversion percentage higher. Enhanced and new programs will also provide a cushion against unforeseen circumstances that may serve to reduce the effectiveness of our existing programs or activities conducted by private enterprise.

I. INTRODUCTION

The Waste Management Department has been submitting reports to the Board of Supervisors updating the status of solid waste diversion in Kern County on a regular basis for the last several years. This report addressed 2002 and 2003 and includes the following:

- Status of diversion programs and activities operated by the Department or in which the Department participates.
- Analysis of the waste disposal data that is used to develop the diversion percentage.
- Level of compliance with the 50 percent diversion mandate established by the Integrated Waste Management Act of 1989 (AB 939).
- Plans for future diversion activities.

II. STATUS OF COUNTY-OPERATED PROGRAMS

A. Source Reduction & Recycling Element

Kern County outlined the strategy to comply with the requirements of the Integrated Waste Management Act of 1989 (more commonly known as AB 939) in its Source Recuction and Recycling Element approved by the Board of Supervisors on October 22, 1992 and accepted by the California Integrated Waste Management Board on January 24, 1995. This document identified 35 separate programs which would be evaluated or implemented in order to increase the overall level of recycling in Kern County. The Waste Management Board has determined that the County is in compliance with its SRRE.

Programs listed in the SRRE include recycling education campaigns, enactment of economic incentives such as gate fees at Kern County Solid Waste Facilities, implementation of procurement policies designed to reward companies using recycling content in their products, physical diversion programs such as wood, metal, and tire recycling, and support of programs operated by private recycling companies who do business in Kern County.

The results of programs listed in the SRRE which are either solely operated by the Department, or which the Department is involved in operating, and produce a tangible amount of diversion are discussed in more detail in this report.

B. Programs Operated by the County

In 2002 and 2003, the Department continued to operate several diversion programs throughout the county. Most of the programs are operated at the landfills and transfer stations to take advantage of existing resources and public convenience. These programs are listed below inTable 1 along with the amount of waste diverted.

Table 1				
DIVERSION PROGRAMS RESULTS - Tons Diverted				
Program	2000	2001	2002	2003
Wood	22,334	20,378	19,032	24,967
Inerts	18,952	16,194	12,688	11,916
Tires	1,624	1,778	2,006	1,952
CRT's	0	0	241	477
Green Waste	0	0	0	720
Scrap Metal; White Goods	3,052	3,801	4,248	4,802
County Drop Offs	488	658	733	805
TOTAL	**46,450**	**42,809**	**38,948**	**45,639**

The Department tracks the annual program costs and uses those figures to evaluate program cost effectiveness. Program costs for 2003 are shown in Table 2.

Table 2					
DIVERSION PROGRAM RESULTS – Costs In 2003					
Program	Tonnage	Admin Cost	Contract Cost	Revenue	Cost Per Ton
Wood	24,967	$17,294	$433,765	$49,968	$16.06
Inerts	11,916	0	0	0	0
Tires	1,952	$19,165	$159,985	$159,251	$10.19
CRT's	477	$17,505	$260,684	0	$583.21
Green Waste	720	$40,878	$9,534	0	$70.02
Scrap Metal, White Goods	4,802	$57,042	$92,320	$206,988	<$12.00>
Drop Off	805	$16,749	$66,263	$7,062	$94.35
TOTAL	$45,639	**$168,633**	**$1,022,551**	**$423,269**	**$16.83**

Table 3 presents a comparison of the cost per recycled ton for each program over the last four years.

Table 3				
DIVERSION PROGRAMS RESULTS Cost Per Recycled Ton for the Past 4 Years				
Program	2000	2001	2002	2003
Wood	$12.46	$12.92	$15.77	$16.06
Inerts	$ 0	$ 0	$ 0	0
Tires	<$6.30>	$28.67	$12.12	$10.19
CRT's	0	0	$615.25	$583.21
Green Waste	0	0	0	$70.02
Scrap Metal, White Goods	$27.06	$10.50	$13.77	<$12.00>
County Drop Offs	$134.01	$108.86	$83.75	$94.35
Total Cost Per Ton (Weighted Average)	$8.95	$9.94	$14.02	$16.83

Although the Department continually finds and implements ways to run the programs more efficiently, the total cost per recycled ton for all programs combined has increased over the past couple of years primarily because of three big changes. These changes were 1) the addition of the CRT Program, 2) the addition of a pilot Greenwaste Recycling Program at the Shafter/Wasco Landfill and 3) an adjustment to the Wood Program because of mulberry tree branches. These changes will be explained more completely along with the following description of each program and significant changes over the last two years.

1. Wood Program - The Wood Program is one in which tree branches and lumber are stockpiled and ground into wood chips at most of our waste management facilities. The wood chips are used for fuel at wood fired co-generation facilities. The program primarily targets customer loads that have nothing but wood in them although some wood is also collected by facility personnel or customers willing to take the time to separate it from mixed loads at the facility.

This program is our largest in terms of weight diverted from disposal and continues to be very cost effective. However, the program did experience a sizable cost increase in 2002.

The cost increase was due to the overabundance of fruitless mulberry tree branches that infuse into the program every fall and winter. The co-generation plants that use the wood chip fuel cannot deal well with loads that contain a high percentage of this fibrous wood and, therefore, we have to handle the mulberry separately. Since it is harder for our contractor to handle and harder still to market, it raises the cost of the program.

In 2003, the program saw an increase in the tonnage accepted into the program with only a modest increase in cost. This increase tonnage is due, at least in part, to the increased activity in the construction and demolition sectors and increased effort by the Department to capture more material at the transfer stations and the Shafter/Wasco Sanitary Landfill. The Department's increased efforts at the landfills will be discussed separately in a later section of this report.

Overall, this program continues to be a very cost effective method of diverting material away from disposal. The tonnage captured is significant and the per ton cost remains low. The Department continues to look for ways to expand this program and capture additional tonnage.

2. Inert Program - The Inert Program allows customers with clean, source separated inert materials (materials such as concrete, AC, brick, etc.) to place their load into stockpiles at the landfills for no charge. These uses include all-weather surfacing for access roads and dumping pads and rip rap in drainage channels. This program is offered at zero cost because having the material allows the Department to avoid the cost of purchasing construction materials for the same uses.

There is, however, a limit to our need for these materials and, therefore, we can only

accept inert loads into the program until the stockpiles reach an established maximum size. Once the maximum stockpile size is reached, we must send the inert loads to the disposal area with the rest of the waste in which case the customer is charged the regular disposal fee. However, all customers are informed of other opportunities for cheaper recycling options at either another landfill or at private companies which process the material for commercial use.

The fluctuation seen in the tonnages processed by this program only reflect the amount of material needed for on site projects, the fluctuation does not necessarily represent a change in the amount of waste inert material generated or recycled. In very few cases does any clean inert material go to disposal even when we are not accepting it for free into the Department program. There is a very well subset of the construction industry that is recycling inert waste because it is economically advantageous to do so. When we are not able to accept the material for free, construction and demolition contractors just turn to the private recyclers. There is a fee for this recycling but it is far less than the landfill disposal fee.

3. Tire Program - The Tire Program is operated in order to provide an option for the businesses and residents of Kern County to recycle their waste tires. Tires were banned from disposal by the State of California in 1993 and the Department has worked to provide a relatively cost effective method by which County residents and businesses can get rid of their waste tires. The program collects waste tires at most waste handling facilities and loads those tires into 45' transport trailers. The loaded trailers are then hauled by contract to a processing plant where they are used to make various rubber products.

The $10.19 per ton cost shown in Table 2 reflects that the revenue from the tire fee does not cover all the costs of the program. However, the cost is lower than in the last couple of years and is attributed to a cost saving realized by combining the duties of the loading crews.

4. CRT (Cathode-Ray Tube) Program - The CRT (Cathode-Ray Tube) Program is also a program created in response to legislative bans. The disposal of items containing cathode-ray tubes (mostly TV's and computer monitors) was banned due to the amount of lead contained in these devices. The program allows residents to dispose of their CRT's at no charge. The Department chose to recommend the "no fee" approach in hopes of minimizing illegal dumping of these items. The Department also teamed with the Kern County thrift stores through a contract with the Bakersfield Association of Retarded Citizens which significantly increased the number of location that residents can drop off their CRT's.

The impetus of this program is customer service. By that measure, it has served the County well. Unfortunately, it is extremely expensive as a recycling program. However, additional State legislation has established a means of reimbursement that should result in a much lower net cost by 2005.

5. Greenwaste Program - The Greenwaste Program is a new program piloted by the

Department in 2003 at the Shafter/Wasco Sanitary Landfill. The program accepts source separated loads of grass, leaves and other non-woody yard wastes for stockpiling and shipping to a compost facility near Lost Hills.

In a six-month period, the program was able to separate and send for composting over 700 tons of greenwaste that would have been disposed. As a pilot program, it is not unusual for costs to start out high. During the pilot phase, the Department intentionally worked smaller volumes so staff could learn the intricacies of the operation. The Department also has more work to do to increase public awareness and cooperation. Based on the pilot phase, the program is being continued at the Shafter/Wasco landfill and has also been expanded to the Bena facility where we will be handling much more significant volumes. The Department feels this program has good potential and will yield significant tonnage increases in the amount of material being recycled at the disposal facilities

6. Scrap Metal/White Goods Program - The Scrap Metal/White Goods Recycling program is another program designed and implemented to comply with State regulations. The disposal of Freon bearing appliances, as well as other metal items deemed economically feasible to salvage is prohibited in California. This program allows customers of County operated waste facilities to place all appliances, metal items, and other similar items into stockpiles for recycling. These items are loaded into roll off bins or end dump vehicles and taken to a metals processor for removal of hazardous materials. Although this program was initiated in response to a state mandate, it has proven to be very cost effective recycling and the Department would continue the program even if the regulations were deleted.

One of the main reasons the program is cost effective is because of the inherent value of scrap metal. In fact, scrap metal prices were up so high this year that the program was a net money-maker for the Department. This isn't always the case, as can be seen in Table 3, but even during periods of low scrap metal value, the program cost remains reasonable.

7. Drop Off Recycling Program - The Drop Off Recycling Program is designed to provide residents with an easy and cost effective way to recycle the common consumer type items typically thought of when recycling discussions take place. These items include such things as newspapers, aluminum beverage cans, glass, cardboard, and other such materials.

The program is set up in a way where community groups sponsor a drop off site and then encourage their members and members of their local community to utilize the site. In return for their efforts, they are given a significant portion of the proceeds received form the sale of those recyclables.

The drop-off program has shown steady improvement each year. In 2003, it had an increased cost per ton due to a new contract for the operations of the sites which caused the overall cost of the program to increase. The Department is attempting to reduce the per ton cost by attracting additional tonnage to the sites which will produce an overall lower cost per ton.

B. Disposal Site Diversion Areas

In late 2002, the Waste Management Department began having Department staff responsible for the day-to-day operations of the diversion area at the Shafter/Wasco Sanitary Landfill. Up to this time, the Department had included this as part of the scope of work for the contracted operator. This change was designed to see if placing County personnel in the diversion area would lead to an increase in the amount of diversion at the landfill similar to our experience with transfer stations. The two main ways we expected to get greater diversion were 1) more motivation among the employees to maximize recycling and 2) greater ease and speed in experimenting with and implementing program modifications and new programs.

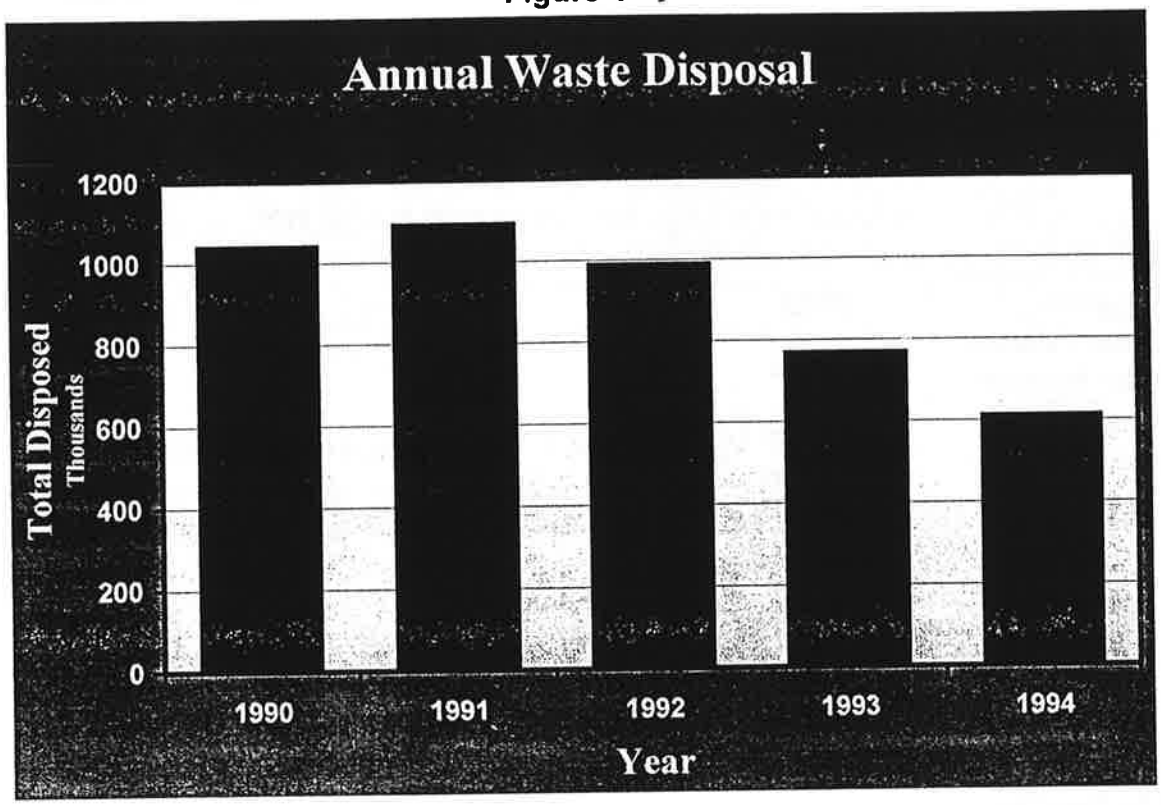
The result of this pilot program showed a marked increase in the overall tonnage diverted. In 2002, prior to Department staff taking responsibility for the sites diversion area, the total tonnage diverted at the Shafter Wasco facility was 4672 tons. In 2003, with the Department staff in place the tonnage diverted increase to 9199 tons, a 97% increase.

This increase caused the Department to begin evaluating the possibility of expanding the program and taking on other sites. Over the first six month of 2004 staff planned and implemented a program to take on the responsibility of the diversion area at the Bena Sanitary Landfill. While it is to early to definitively say what the results will be, early indications show that the program at Bena will achieve results similar to those seen at the Shafter Wasco facility but on an even larger scale.

C. Gate Fee

In July of 1993, the Department instituted a gate fee system for commercial waste and construction and demolition material. This change in how fees were collected for landfill use provided an economic incentive to businesses to find alternate ways to handle their waste. Many commercial generators began recycling and diversion programs to minimize the amount of waste they were sending to the landfill. The vast majority of the recycling came from the construction and demolition industries. The result of these actions was a marked decrease in the amount of waste coming into Kern County facilities as shown in Figure 1 below.

Figure 1



This decrease in disposal accounts for a large percentage of the diversion rate achieved by the cities and unincorporated portion of the County of Kern. This program has been instrumental in the success of many jurisdictions reaching the 50% diversion level. Recent disposal tonnage trends are addressed in Section IV of this report.

III. PROGRAMS OPERATED BY OTHERS WITH COUNTY COOPERATION

A. City Of Bakersfield Green Waste Diversion

The City of Bakersfield operates a green waste processing facility located on Mt. Vernon Avenue. The facility accepts the green waste material collected in the City and County curbside collection programs as well as green waste brought to the facility directly by self haul customers. The green waste received at the facility is then processed into compost, wood chips, or other products suitable for marketing. The County has participated in this program for several years through financial assistance. The amount of County financial assistance is determined by splitting the net cost of the operation in proportion to the amount of green waste received at the facility that is generated within the unincorporated county.

The amount of green waste diverted at the facility in 2002 was about the same as in 2001, the first full year that the separate collection of green waste program was implemented in the unincorporated area around Bakersfield. However, there was a 31% increase in

diversion for the unincorporated area in 2003, Table 4 shows the diversion tonnages for the unincorporated area for the last four years.

Table 4				
CITY OF BAKERSFIELD - MT. VERNON FACILITY COUNTY UNINCORPORATED DIVERTED TONNAGE AS REPORTED BY CITY				
Program	2000	2001	2002	2003
COB Green Waste Self Haul Material	17,492	16,747	15,631	21,742
COB Green Waste Curbside Collection	11,099	20,963	21,061	26,294
TOTAL	28,591	37,710	36,692	48,036

A large part of the increase in 2003 is a result of the significant growth in the Bakersfield area. As growth occurs in the unincorporated metropolitan area, the number of homes participating in the separate collection of green waste program increases. In addition, the amount of self-hauled green waste is likely to increase as well. It should also be noted that there was a significant increase in the proportion of unincorporated use of the facility as reported by the City.

The cost of the program is summarized in Table 5 and Table 6.

Table 5				
CITY OF BAKERSFIELD – MT VERNON FACILITY 2003				
Program	**Tonnage**	**Admin. Cost**	**Net Contract Cost**	**Cost Per Ton**
Green Waste	**48,036**	**$13,070**	**$1,114,768**	**$23.48**

Table 6				
CITY OF BAKERSFIELD – MT. VERNON FACILITY COUNTY COST OVER LAST 4 YEARS				
PROGRAM	**2000**	**2001**	**2002**	**2003**
Total County Cost	$836,158	$803,192	$1,018,337	$1,127,838
TOTAL COST PER TON	$29.25	$21.30	$27.75	$23.48

The net contract cost has gone up as would be expected by the increases in tonnage processed.

B. Tehachapi MRF

The Tehachapi Material Recovery Facility is privately owned and operated by Tehachapi Recycling, Inc. (TRI). Incoming waste is sorted over a conveyor belt to recover recyclable materials. Other recycling activities are also conducted at the facility. facility which sorts waste material for recovery of recyclables. Although the facility is privately owned and operated, the County supports the facility through a few different agreements. One agreement allows Tehachapi Recycling to collect a recycling surcharge on residents and businesses as set by the Board of Supervisors. Two other contracts require Tehachapi to conduct certain recycling programs with compensation paid by the County. The waste brought to the facility is sorted and the recycled material is split between the various jurisdictions from which the waste material is collected.

The Tehachapi Material Recovery Facility continued to provide diversion for the County unincorporated area, the City of Tehachapi, and California City. During the year 2003, the facility reported diverting 16,193 tons of mixed municipal waste. The breakdown on the diversion of the mixed municipal waste as reported by Tehachapi Recycling , Inc., is shown in Table 7 below.

Table 7

TEHACHAPI MRF
TONS DIVERTED OVER LAST 5 YEARS AS REPORTED BY TRI

Jurisdiction	Tons Diverted 2000	Tons Diverted 2001	Tons Diverted 2002	Tons Diverted 2003
County of Kern	12,402	14,838	10,731	10,390
City of Tehachapi	5,512	3,660	3,879	3,989
City of California City	3,000	2,527	1,859	1,814

C. MRC Facility

The franchise garbage haulers in the metropolitan Bakersfield area worked together to develop a construction and demolition material facility as required in their franchise contract with the County. The facility they constructed is adjacent to the City of Bakersfield's Mt. Vernon green waste processing facility. This facility handled approximately 3,000 tons of mixed C&D material that they hauled in 2003 from within the City and unincorporated area. Due to the loss of their primary depository for the separated materials, the amount of material handled declined in 2003 from the 8,700 tons handled in 2002. The haulers are presently seeking a new customer for these materials.

D. Westside Waste Management

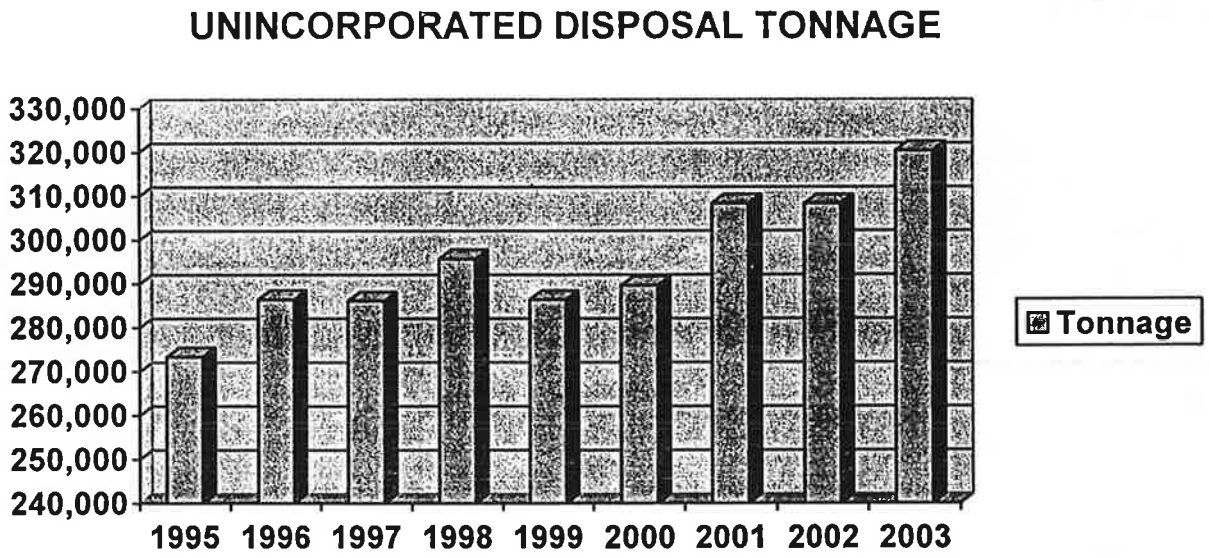
Westside Waste Management operates a drop-off recycling center and a selected loads recycling facility in Taft. In addition, they work with commercial customers to have them source separate recyclable materials on-site. These programs are conducted in compliance with provisions in their franchise contract and provide an average of over 500 tons per year in waste diverted from disposal.

IV. DISPOSAL UPDATE

A. Disposal Trend Since 1995

Kern Unincorporated disposal tonnage increased approximately 45,000 tons between year 1995 and 2003, which is approximately 2% per year. Figure 2 below displays the increasing trend of disposal over that period.

Figure 2



B. Disposal Summary for 2002 and 2003

Disposal tonnages were the same between 2001 and 2002, however annual disposal increased approximately 12,500 in 2003 for the unincorporated area. Much of this increase is attributable to significant growth in the Bakersfield metropolitan area. A population growth spurt creates significant increases in disposal in two ways, short-term construction activity and the ongoing waste generation from new households and businesses. The following is a detailed breakdown of the sources of the disposal increase.

1. Disposal hauled in Franchise Hauler Collection Vehicles
   Increase: 5,600 tons

   This is the increase attributable to increased households and businesses.

2. Disposal hauled in all other vehicles
   Increase: 5,800 tons

   By analyzing the material type of the waste hauled in these vehicles we can determine that the vast majority of the 5,800 ton increase in this category is construction and demolition waste.

3. Disposal from the Tehachapi Materials Recovery Facility
   Increase: 3,800 tons

   The diversion percentage of the Materials Recovery Facility decreased while the amount of waste received increased. The residual waste from this facility is disposed of at the Tehachapi Sanitary Landfill.

4. Disposal at facilities not operated by the County
   Decrease: 2700 tons

   There are six privately operated disposal facilities in Kern County. One of those facilities, A&M Disposal, performs significant recycling. The facility accepts waste classified as inerts such as soil, concrete and asphalt. Disposal tonnages reported from this site are highly variable from quarter to quarter. Approximately 3,200 less tons were disposed in 2003 than in 2002 as reported by A&M Disposal. Disposal from the other privately operated disposal facilities combined was up 500 tons resulting in a net decrease of 2,700 tons.

V. Estimated 2002 and 2003 Diversion Percentage

The estimated diversion percentages for the unincorporated area over the last four years are shown in Table 8.

Table 8				
ANNUAL DIVERSION RATES FOR UNINCORPORATED KERN COUNTY				
	2000	2001	2002	2003*
Waste Generation	589,665	635,027	630,550	643,253
Disposal Tonnage	289,653	308,384	308,318	320,418
Diversion Tonnage	300,012	326,643	322,318	322,835
Diversion Rate	50%	51%	51%	50%

*Figures are estimated pending release of final information from the State of California

The County continues to maintain a diversion percentage greater than the 50% state mandate. Accomplishing this while disposal has continued to increase over this same period means that diversion efforts are keeping up with the growth. Credit for the success in diversion goes as much to private enterprise as to the County and other entities acknowledged in this report. All the recycling accomplished by private buy-back centers, metal recyclers, construction material recyclers and many others contribute significantly to our success. In addition, thrift stores and other reuse and reduction efforts are also counted indirectly by the calculation method used by the State to determine diversion percentages.

The diversion status of the cities in Kern County and other counties in California are included as Attachments 1 and 2.

VI. DEPARTMENT'S PLANS FOR INCREASING DIVERSION BEYOND 50%

A. Curbside Bulky Waste Collection Program

Implementation of a call-to-schedule Curbside Bulky Waste Collection Program in unincorporated metropolitan Bakersfield, which your Board approved as part of the basic collection service, began in January, 2004. Although this is mainly a customer service program intended to help in the reduction of illegal dumping, it will contribute in the diversion of waste as the haulers take the collected bulky waste to either the Goodwilll or Salvation Army warehouses where any usable or re-sellable material is sent to the thrift stores. This provides a re-use market for the collected materal.

For the time period of January 26, 2004 thru June 30, 2004, a total of 2,722 items were collected. Of the 2,722 items scheduled for collection, 893 were white goods, 1,657 were furniture, and 172 were items with cathode ray tubes. The majority of these items were reused or recycled.

B. Curbside Recycling

Voluntary curbside recycling has been available within the city limits of Bakersfield for two years. The City of Bakersfield program is a premium service providing bi-weekly collection of mixed plastic, glass and aluminum items. The program currently costs $80 per year with a minimum advance payment of $20 quarterly. Reportedly, the City of Bakersfield voluntary program is experiencing less than 5% overall participation by eligible customers. In an effort to increase recycling in the unincorporated metropolitan Bakersfield area, the Department approached the local franchise haulers to discuss expansion of the voluntary curbside recycling program into the metropolitan Bakersfield Universal Collection Area. Your Board recently approved the implementation of the program to start in January 2005 and it will operate very similar to Bakersfield's program. Also similar to Bakersfield's program, the county pilot voluntary curbside recycling program will be offered as an additional service at a cost of $80 per year with a minimum advance payment of $20 quarterly and that the program be evaluated after one year.

C. Green Waste

The Department began collecting grass, leaves, and other material suitable to send to composting facilities in 2003 at the Shafter /Wasco Sanitary Landfill. The program showed a significant potential for becoming a viable diversion program at other facilities if end processors could be found to handle the material.

The Department began looking at other processing facilities and in 2004 implemented a similar program at the Bena Sanitary Landfill and the Lebec Transfer Station. These programs allowed users of these facilities bringing source separated loads of grass, leaves, manure, or other similar material, to place this material in a stockpile for composting. The new programs were able to take advantage of the information learned during the pilot program at Shafter/Wasco and thereby began diverting larger amounts of material within weeks of program implementation.

Current results show that the combined programs will divert 2,000 to 3,000 tons of material in 2004 and possibility as much as 6,000 to 10,000 tons in 2005

D. Mixed Construction And Demolition Debris (C&D) Recycling

Contractors in the construction and demolition industries already do a pretty effective job of recycling or reusing construction materials. The most recycled of these materials, on a tonnage basis, are concrete, wood, brick and metal. Recycling or reusing these materials are especially attractive from a waste management standpoint because they are heavy

and, therefore, make a large contribution to the diversion percentage. The main reason contractors are recycling much of the construction and demolition waste is that there are substantial economic incentives to do so. The cost of disposal is much greater than the cost of recycling most of the materials. The limitation on how much a contractor chooses to recycle is related to the cost of keeping the material separate and transportation. When the contractor determines it is not cost effective to recycle or reuse the materials, loads of mixed debris (what is commonly referred to as mixed C&D) come to the landfills.

Some of the County Franchise Haulers have established operations that sort and recycle mixed C&D. These operations are effective for the area of waste stream targeted.

Despite the existing efforts of the franchise haulers and construction and demolition contractors, the shear volume of construction activity in Kern County results in the disposal of significant amounts of mixed C&D. Although it is costly to sort and recycle these materials once they are mixed (typically in the range of $40 to $60 per recycled ton), this is less costly than most other programs that target lighter or even more commingled wastes.

The Department intends to experiment with mixed C&D recycling on a small scale at the Bena Landfill starting in 2005.

E. Select Material Recovery Facility

Another approach to recycling that the Department is evaluating is a Select Material Recovery Facility. The basic concept is to screen loads as they arrive at the landfill. If the load is determined to contain a large amount of easily sortable recyclable waste, then the customer is sent to a Recovery Facility instead of the dumping pad. The customer dumps the load at the facility where workers or automatic equipment sorts the waste for recyclables. Sorted recyclables are marketed and the residual waste is transported to the dumping pad for disposal. This type of operation targets customers using open top vehicles or containers. Waste in these loads can be observed for purposes of screening and the waste is often easily sorted. Packer trucks (collection vehicles that service residential and commercial routes) and commercial compactor containers would not be targeted for several reasons: 1) the waste can't be observed until it is dumped, 2) the waste is difficult to sort, 3) the percentage of recyclable material to residual waste is relatively low and 4) the quality of the recycled material tends to be lower because it is more soiled and damaged.

A Select Material Recovery Facility is most effective if located at a landfill or is made a part of a transfer station operation. A major reason for this is customer convenience. As loads are designated either recyclable or not, the trip is basically the same for the customer. If the recycling facility is not co-located at the disposal site, then the customer needs to know before starting the trip whether or not it will be considered recyclable enough. It would be virtually impossible to educate the public to this extent. The consequence of this would be that the facility would not get maximum use because many potential customers would opt to go straight to the disposal facility to avoid the possibility of rejection and a second trip.

The select material recovery approach can be seen as an extension of a mixed C&D recycling facility since it is basically the same concept addressing a broader portion of the waste stream. The Department will continue to evaluate making this type of facility a component of its diversion strategy.

VIII. SUMMARY

Kern County continues to meet the diversion mandate of 50 percent diversion for the unincorporated area. The diversion programs that the Department operates or participates in continue to perform well. Enhancements to existing programs and Implementation of new programs are projected to keep the County above the 50% level. The Department is also evaluating new programs that would allow the County to increase the diversion percentage but there would be substantial costs associated with these programs.

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SOLID WASTE DIVERSION STATUS REPORT 2006

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Printed on Recycled Paper

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EXECUTIVE SUMMARY

The diversion rate for the unincorporated portion of Kern County remains above the 50% level as legislated by AB 939. The programs operated by the Department continue to perform well with tonnage increases being seen in all of the implemented programs. Programs operated by other entities under contract with the County are also performing well and, overall, diversion from these programs has increased. These tonnage increases are needed to keep up with the higher disposal tonnages seen due to the population growth occurring within the County. In 2004, a major change in the way the diversion rate is calculated was implemented by the California Integrated Waste Management Board. The new calculation method results in the County reporting a higher diversion percentage. This change in the calculation method, combined with both enhanced and new diversion programs, provides a cushion against unforeseen circumstances that may serve to reduce the diversion rates.

I. INTRODUCTION

Kern County outlined the strategy to comply with the requirements of the Integrated Waste Management Act of 1989 (more commonly known as AB 939) in its Source Reduction, and Recycling Element approved by the Board of Supervisors on October 22, 1992 and accepted by the California Integrated Waste Management Board on January 24, 1995. This document identified 35 separate programs which would be evaluated or implemented in order to increase the overall level of recycling in Kern County. The Waste Management Board has determined that the County is in compliance with its SRRE.

Programs listed in the SRRE include recycling education campaigns, enactment of economic incentives such as gate fees at Kern County Solid Waste Facilities, implementation of procurement policies designed to reward companies using recycling content in their products, physical diversion programs such as wood, metal, and tire recycling, and support of programs operated by private recycling companies who do business in Kern County.

The Waste Management Department annually submits reports to the Board of Supervisors updating the status of solid waste diversion in Kern County. The results of programs listed in the SRRE which are either solely operated by the Department, or which the Department is involved in operating, and produce a tangible amount of diversion are discussed in more detail in this report. This report includes the following:

- Status of diversion programs and activities operated by the Department or in which the Department participates.
- Analysis of the waste disposal data that is used to develop the diversion percentage.
- Level of compliance with the 50 percent diversion mandate established by the Integrated Waste Management Act of 1989 (AB 939).
- Plans for future diversion activities.

II. STATUS OF COUNTY-OPERATED PROGRAMS

In 2005, the Department continued to operate several diversion programs throughout the County. Most of the programs are operated at the landfills and transfer stations to take advantage of existing resources and for public convenience. These programs are listed below in Table 1 along with the amount of waste diverted over the five-year period from 2001 to 2005.

Table 1 DIVERSION PROGRAM RESULTS Tons Diverted					
Program	2001	2002	2003	2004	2005
Wood	20,378	19,032	24,967	22,258	24,526
Inerts	16,194	12,688	11,916	24,383	40,570
Tires	1,778	2,006	1,952	2,081	2,475
Cathode Ray Tubes (CRT's)	np	241	477	365	571
Green Waste	np	np	720	2,341	9,355
Scrap Metal; White Goods	3,801	4,248	4,802	4,850	5,372
Country Drop Offs	658	733	805	836	959
TOTAL	42,809	38,948	45,639	57,114	83,828

np – No Program

The Department also tracks annual program costs and uses those figures to evaluate overall program cost effectiveness. Table 2 presents the cost per ton for each program over the past five years. The costs are those charges paid by the Department.

Table 2 DIVERSION PROGRAM RESULTS Cost ($) per Recycled Ton for the Past Five Years					
Program	2001	2002	2003	2004	2005
Wood	12.92	15.77	16.06	18.16	19.55
Inerts	0	0	0	0	0
Tires	28.67	12.12	10.19	8.57	39.50
Cathode Ray Tubes (CRT's)	0	615.25	583.21	212.37	<219.07>
Green Waste	0	0	70.02	30.36	25.92
Scrap Metal; White Goods	10.50	13.77	<12.00>	<14.09>	<25.68>
Country Drop Offs	108.86	83.75	94.35	98.83	92.72
Voluntary Curbside Recycling	n/a	n/a	n/a	n/a	0
TOTAL (Weighted Average)	9.95	14.02	16.83	15.70	7.72

The overall per ton cost of the diversion programs showed a significant decrease in cost in 2005 due to a number of specific changes. The biggest change was that the CRT program went from a significant per ton cost to a per ton revenue. This was combined with an increase in the value of the scrap metal being

recovered. Descriptions of each diversion program and significant changes for 2005 are discussed more completely below.

A. Wood Program

The Wood Program is one in which tree branches and lumber are stockpiled and ground into wood chips at most of our waste management facilities. The wood chips are used for fuel at wood fired cogeneration facilities, or can be used on-site at the disposal facilities as a soil amendment for slope stabilization and erosion control. The program primarily targets customer loads that have nothing but wood in them, although some wood is also collected by facility personnel or customers willing to take the time to separate it from mixed loads at the facility.

This program is our second largest in terms of weight diverted from disposal and continues to be very cost effective. However, the program did experience increased costs in 2004 and 2005 due to the extra costs for processing the overabundance of fruitless mulberry tree branches that infuse into the program in the fall and winter. The cogeneration plants that use the wood chip fuel cannot deal well with loads that contain a high percentage of the fibrous mulberry wood and, therefore, we have to handle the mulberry separately. Since it is harder for the contractor to handle and harder still to market, it raises the cost of the program.

In 2005, the program saw a 10% increase in the tonnage accepted into the program with a modest increase in cost per ton. This increase in tonnage is due, at least in part, to the increased activity in the construction and demolition sectors, and increased effort by the Department to capture more material at the transfer stations and landfill diversion areas.

The Department continues to look for ways to expand this program and capture additional tonnage, such as offering half price discounts to customers for source separated wood.

B. Inert Program

The Inert Program allows customers with clean, source separated inert materials (materials such as clean dirt, concrete, brick, roofing tiles, etc.) to place their load into stockpiles at the landfills for no charge. After this material is crushed using heavy equipment it is used on-site for all-weather surfacing for access roads and dumping pads and rip-rap in drainage channels. This program is offered at zero cost because having the material allows the Department to avoid the cost of purchasing construction materials for the same uses.

There is, however, a limit to our need for these materials and, therefore, we can only accept inert loads into the program until the stockpiles reach an established maximum size. There was a large jump in the amount of inert material the Department accepted for recycling in 2005 as there was a need create all weather roads and pads at both the Shafter and Bena facilities. Utilizing the material in this manner kept the stockpile size at both facilities well below the permitted maximum. Once the maximum stockpile size is reached all customers are informed of other recycling options at either another landfill or at private companies which process the material for commercial use.

The fluctuation seen in the tonnages processed by this program only reflects the amount of material needed for on-site projects; this fluctuation does not necessarily represent a change in the amount of waste inert material generated or recycled. In very few cases does any clean inert material go to disposal even when we are not accepting it for free into the Department program. There is a subset of the construction industry that is recycling inert waste because it is economically advantageous to do so. When we are not able to accept the material for free, construction and demolition contractors just turn to the private recyclers. There is a fee for this recycling but it is far less than the landfill disposal fee.

C. Tire Program

The Tire Program is operated in order to provide an option for the businesses and residents of Kern County to recycle their waste tires. Tires were banned from disposal by the State of California in 1993 and the Department has worked to provide a relatively cost-effective method by which County residents and businesses can get rid of their waste tires. The program collects waste tires at most waste handling facilities and loads those tires into 45' transport trailers. The loaded trailers are then hauled by contract to a processing plant where they are used to make various rubber products.

The per ton cost shown in Table 2 reflects that the revenue from the tire fee does not cover all the costs of the program. In 2005, a new contract was implemented with higher per unit costs which contributes significantly to the increased per ton cost. The Department has also experienced higher loading costs due to fuel and personnel costs. The program also continues to accept illegally dumped tires at no charge and that waste stream provides no offsetting revenue causing the overall per ton price to increase as well. The new tire removal contract, which was entered into in 2005, should help to control cost increases in the program over the next four years. However, the overall cost per ton for the program currently exceeds the revenue generated by the gate fees for tires. At the current rate, the Department is absorbing approximately $100,000 in program

costs not being reimbursed by the tire gate fee. The vast majority of the revenue collected through the gate fee program is from commercial customers who have chosen to use the County program rather than implement tire recycling programs at their facilities. In many cases this is due to the company not being large enough to effectively operate a tire recycling program.

The cost savings of using the County program may become an incentive for other companies to drop their tire recycling programs if that cost savings becomes too pronounced. If they were to do so it would greatly increase the tonnage through the program. This in turn would also increase the dollar amount the Department would be forced to contribute to subsidize the program. In order to avoid this problem, the Department will study the need to adjust the tire fee charged for the program.

D. CRT (Cathode-Ray Tube) Program

The CRT Program is a program created in response to legislative bans. The start up of the program occurred when the State was not making any reimbursements to the collectors or processors of the material. This resulted in very high per ton costs to operate the program.

In 2005, the State implemented the reimbursement program which helped the Department control the cost of the program. In order for the Department to take advantage of the reimbursement program, it was first necessary for the Department to become an approved collector of the units. The Department applied to the State for this designation and was approved provided a specific criterion was met. This included having all units collected at the site processed prior to implementing the new reimbursement program. In addition to removing those units, a process was implemented to track and verify generation area had to be put in place. These steps allowed the Department to begin receiving the now available reimbursements.

Overall, the program has expended significantly more money that has been received but when evaluated for just 2005 shows that the reimbursement rate will, over time, allow the Department to recover the initial start up costs incurred. This process will take a number of years but in the interim provides us with a very cost-effective program.

E. Greenwaste Program

The Greenwaste Program was piloted by the Department in 2003 at the Shafter/Wasco Sanitary Landfill. The program accepts source separated loads of grass, leaves and other non-woody yard wastes for stockpiling and shipping to a compost facility. In its first year, the program was able

to separate and send for composting over 700 tons of greenwaste that would have been disposed at the landfill. As a pilot program, it is not unusual for costs to start out high when working with smaller volumes.

Based on the success of the pilot phase, the Greenwaste Program was expanded in the second half of 2004 to include the Bena and Lebec facilities. Handling these more significant volumes also enabled the Department to reduce the costs to recycle this material by more than half ($30.36/ton in 2004 vs. $70.02/ton in 2003). The Department felt this program had good potential to yield even more significant tonnage increases in the amount of material being recycled and worked to educate the general public to the availability of the program.

As seen in the 2005 results, these efforts were very successful in diverting additional material. The tonnage increased from 2,341 tons in 2004 to 9,355 tons in 2005. This increase was due to the implementation of a very good communication procedure between the gate house, diversion area, and contracted operator. Working as a team with increased diversion of greenwaste being a primary goal allowed the staff and contractor in direct more loads to the diversion area as well as sending loads of divertable material back from the active disposal area whenever the contractor identified an appropriate load of green waste. This operations method was critical to the increase seen in the tonnage diverted.

The Department is continuing to implement procedures designed to increase this tonnage over the next year. These procedures include limited sorting capabilities, further communication refinements, as well as the use of additional resources such as larger loaders, roll off containers, loading docks and other similar resources. Currently, staff estimates that the tonnage available at the locations currently operating a program can be increased by an additional 25% utilizing the above listed enhancements. To increase the tonnage beyond that point would require some regulatory actions that would allow the Department to charge for any greenwaste going to disposal.

F. Scrap Metal/White Goods Program

The Scrap Metal/White Goods Recycling program is another program designed and implemented to comply with State regulations. The disposal of Freon-bearing appliances (refrigerators, freezers, and air conditioning units), as well as other metal items deemed economically feasible to salvage, is prohibited in California.

This program allows customers of County operated waste facilities to place all appliances, metal items, and other similar items into stockpiles

for recycling at no cost. Many other municipalities in the state charge to accept any Freon-bearing appliances, since the Freon must be evacuated from the systems prior to the metal being recycled.

These collected items are loaded into roll off bins or end dump vehicles and taken to a metals processor for removal of hazardous materials. Although this program was initiated in response to a state mandate, it has proven to be very cost effective recycling and the Department would continue the program even if the regulations were deleted.

One of the main reasons the program is cost effective is the inherent value of scrap metal. In fact, scrap metal prices were up so high in 2004 and 2005 that the program produced more revenue than expenses. This isn't always the case, as can be seen in Table 2, but even during periods of low scrap metal value, the program cost remains reasonable. New prohibitions on recycling certain appliances that contain other hazardous materials, such as mercury switches and condensers containing PCB's, are expected to increase overall program costs in coming years; however, due to the revenue we receive from the sale of the scrap metal, we do not anticipate having to pass the extra costs for handling prohibited appliances along to our customers in the form of a gate fee for appliances at this time. There is a possibility that this added requirement may add as much as $250,000 per year in costs to the program. If in the future scrap metal revenues fall below the current level, the Department may have to explore other methods of operating the program

G. Drop Off Recycling Program

The Drop Off Recycling Program is designed to provide residents with an easy and cost-effective way to recycle the common consumer type items typically thought of when recycling discussions take place. These items include such things as newspapers, aluminum beverage cans, glass, cardboard, and other such materials.

The program is set up in a way where community groups sponsor a drop off site and then encourage their members and members of their local community to utilize the site. In return for their efforts, they are given a significant portion of the proceeds received from the sale of those recyclables.

The drop-off program has shown steady improvement each year. While the cost of the program is higher than most other programs operated by the Department, it does provide an avenue for residents in the outlying areas to recycle the more common recyclables such as newspaper, cardboard and other type items. This helps the Department to promote

recycling in general while doing so in areas that would otherwise not have access to recycling programs.

III. DISPOSAL SITE DIVERSION AREAS

The diversion programs discussed in Section 2 are operated at multiple locations throughout the county. Oversight of these programs at the landfills is made part of the contract operator's duties in most cases.

Starting in late 2002, the Waste Management Department began having Department staff responsible for the day-to-day operations of the diversion area at the Shafter/Wasco Sanitary Landfill. Up to this time, the Department had included this as part of the scope of work for the contracted operator. This change was designed to see if placing County personnel in the diversion area would lead to an increase in the amount of diversion at the landfill similar to our experience with transfer stations. The two main ways we expected to get greater diversion were 1) more motivation among the employees to maximize recycling and 2) greater ease and speed in experimenting with and implementing program modifications and new programs.

It is important to note that the diversion figures reported in this Section are not additional to the figures reported in Section 2. The purpose for this Section is to illustrate that much of the increased tonnages for the countywide programs discussed in Section 2 is due to the efforts made by Department staff at two specific landfill sites.

A. Shafter/Wasco Sanitary Landfill

The result of the pilot program showed a marked increase in the overall tonnage diverted. In 2002, prior to Department staff taking responsibility for the sites diversion area, the total tonnage diverted at the Shafter/Wasco facility, (without accounting for inert material which is used on site for facility maintenance) was 2,343 tons. In 2003, with the Department staff in place, the tonnage diverted increased to 4,204 tons, a 79% increase. In 2004, diversion rates at Shafter/Wasco continued to rise under Departmental staffing with 5,250 tons diverted.

The amount of material that could be processed at the diversion area reached its effective maximum at 5,200 tons without modifying the operation. In 2005, the tonnage diverted remained constant at that mark and reviews were done to determine what steps needed to be taken to allow more material to be diverted.

The first step needed was to increase the area being devoted to the diversion effort. The necessary studies and permits were obtained and in late 2005 the area was expanded from 2.3 acres to 6.1 acres. This allowed the implementation of program enhancements as well as new programs designed to capture more material. The results of these efforts will not be known until the end of 2006 but early indications are that the tonnage being diverted has increased.

Table 3 Shafter Diversion				
Program	2002	2003	2004	2005
CRT's	32	38	23	78
Wood	1,507	2,545	3,029	2,919
Greenwaste	0	600	1,167	1,155
Tires	252	250	291	407
Scrap Metal–White Goods	551	770	738	701
Total Tonnage	2,343	4,204	5,250	5,261

B. Bena Sanitary Landfill

The dramatic results seen at the Shafter facility caused the Department to evaluate expanding the program and taking on other sites, and in the second quarter of 2004, Department staff took over operation of the diversion area at the Bena Sanitary Landfill. As a result, annual diversion rates at Bena jumped in 2004 by 95% (6,215 tons in 2004; 3,180 tons in 2003), while at the same time reducing overall recycling costs by over half ($31.04/ton in 2004 vs. $50.72/ton in 2003). Due to the economies of scale at Bena, even more pronounced program improvements were implemented in 2005. The results continue to show that Department staffing of these areas is justified as the tonnage diverted rose from the 6,215 in 2004 to 14,654 tons in 2005. As with the information for Shafter, these numbers do not take into account the inert material being diverted as that material is also used on site for maintenance purposes.

Table 4 Bena Diversion			
Program	2003	2004	2005
CRT's	161	155	206
Wood	1,015	2,063	3,104
Greenwaste	0	1,084	7,897
Tires	795	1,169	1,379
Scrap Metal – White Goods	1,207	1,741	2,067
Total Tonnage	3,180	6,215	14,654

IV. PROGRAMS OPERATED BY OTHERS WITH COUNTY COOPERATION

A. City of Bakersfield Green Waste Diversion

The City of Bakersfield operates a green waste processing facility located on Mt. Vernon Avenue. The facility accepts the green waste material collected in the City and County curbside collection programs as well as green waste brought to the facility directly by self-haul customers. The green waste received at the facility is then processed into compost, wood chips, or other products suitable for marketing. The County has participated in this program for several years through financial assistance. The amount of County financial assistance is determined by splitting the net cost of the operation in proportion to the amount of green waste received at the facility that is generated within the unincorporated county.

The amount of green waste diverted at the facility in 2005 increased significantly over the previous year.

Table 5

CITY OF BAKERSFIELD - MT. VERNON FACILITY
COUNTY UNINCORPORATED AREA
DIVERTED TONNAGE AS REPORTED BY CITY

Program	2001	2002	2003	2004	2005
Self Haul Material	16,747	15,631	21,742	23,077	31,043
Curbside Collection	20,963	21,061	26,294	28,086	28,573
TOTAL	37,710	36,692	48,036	51,163	59,616

A large part of the increased tonnage diverted over the last two years is a result of the significant growth in the Bakersfield area. As this growth continues to occur in the unincorporated metropolitan area, the number of homes participating in the separate collection of green waste program also increases. In addition, the amount of self-hauled green waste has increased as well. There has also been a significant increase in the proportion of unincorporated use of the facility as reported by the City. This increase is not expected to continue and is thought to be more of a short term anomaly. The cost of the program over the last five years is summarized in Table 6 below.

Table 6 CITY OF BAKERSFIELD – MT. VERNON FACILITY COUNTY COST OVER LAST 5 YEARS					
Program	**2001**	**2002**	**2003**	**2004**	**2005**
TOTAL COUNTY COST	$803,192	$1,018,337	$1,127,838	$1,338,506	$1,450,839
TOTAL COST PER TON	$21.30	$27.75	$23.48	$25.65	$24.34

As shown, the net contract cost to the County has continued to go up as would be expected by the increases in tonnage processed, however, it has the effect of lowering the per ton cost simply through an economy of scale.

B. Tehachapi MRF

The Tehachapi Material Recovery Facility is privately owned and operated by Tehachapi Recycling, Inc. Incoming waste is sorted over a conveyor belt to recover recyclable materials. Other recycling activities are also conducted at the facility, facility which sorts waste material for recovery of recyclables. Although the facility is privately owned and operated, the County supports the facility through a few different agreements. One agreement allows Tehachapi Recycling to collect a recycling surcharge on residents and businesses as set by the Board of Supervisors. Two other contracts require Tehachapi Recycling to conduct certain recycling programs with compensation paid by the County. The waste brought to the facility is sorted and the recycled material is split between the various jurisdictions from which the waste material is collected.

The Tehachapi Material Recovery Facility continued to provide diversion for the County unincorporated area, the City of Tehachapi, and California City. During the year 2005, the facility reported diverting 25,743 tons of mixed municipal waste. The breakdown on the diversion of the mixed municipal waste as reported by Tehachapi Recycling, Inc., is shown in Table 7 below.

TABLE 7 TEHACHAPI MRF TONS DIVERTED OVER LAST 5 YEARS AS REPORTED BY TRI					
Jurisdiction	**Tons Diverted 2001**	**Tons Diverted 2002**	**Tons Diverted 2003**	**Tons Diverted 2004**	**Tons Diverted 2005**
County of Kern	14,838	10,731	10,390	14,445	16,053
City of Tehachapi	3,660	3,879	3,989	4,905	6,070
City of California City	2,527	1,859	1,814	2,807	3,620

C. MRC Facility

The franchise garbage haulers in the metropolitan Bakersfield area worked together to develop a construction and demolition material facility as required in their franchise contract with the County. The facility they constructed in mid-2005 is adjacent to the City of Bakersfield's Mt. Vernon green waste processing facility. This facility accepts mixed C&D material and separates out the items for recycling or diversion. This is done through a series of screens, belts, and sorting stations. The in-bound material is directed through this process with material separated out being sent to other processors for recycling.

MRC recycled 1,600 tons of C&D material in 2004. Their recycling increased to 5,160 tons in 2005 with their new equipment operational for only a few months and accepting limited loads while in start-up phase. Their recycling is expected to be much greater in 2006 after a full year of operating with the new equipment and expanding load acceptance to other commercial customers.

D. Westside Waste Management

Westside Waste Management operates a drop-off recycling center and a selected loads recycling facility in Taft. In addition, they work with commercial customers to have them source separated recyclable materials on-site. These programs are conducted in compliance with provisions in their franchise contract and provide an average of 200 tons per month in waste diverted from disposal.

E. Voluntary Curbside Recycling

The County, through contract with Metropolitan Recycling Corporation (MRC), began offering a curbside recycling program in the unincorporated portion of the Bakersfield metropolitan area in January, 2005. This

program offers residents a convenient way to recycle many typical household materials such as newspaper, cans, bottles, cardboard, glass and junk mail. The resident is provided a 96-gallon blue cart which is picked up every other week. The cost to the resident is $80 per year.

MRC estimates that 276 tons of material was recycled in the first full year. Approximately 600 households are participating which represents about 1% of the total 43,800 households in the service area. Those that are participating are recycling an average of approximately 910 pounds per year.

The Department expects significant improvement in this program in the coming year. Lower results are to be expected in the first year of the program due to the timing of initial implementation and general awareness of the program's availability. The Department and MRC are continuing promotional efforts to bolster participation.

Concurrently, consideration is being given through a joint effort of the City and County to convert the program from voluntary to mandatory. This is discussed further in Section VII. B. of this report.

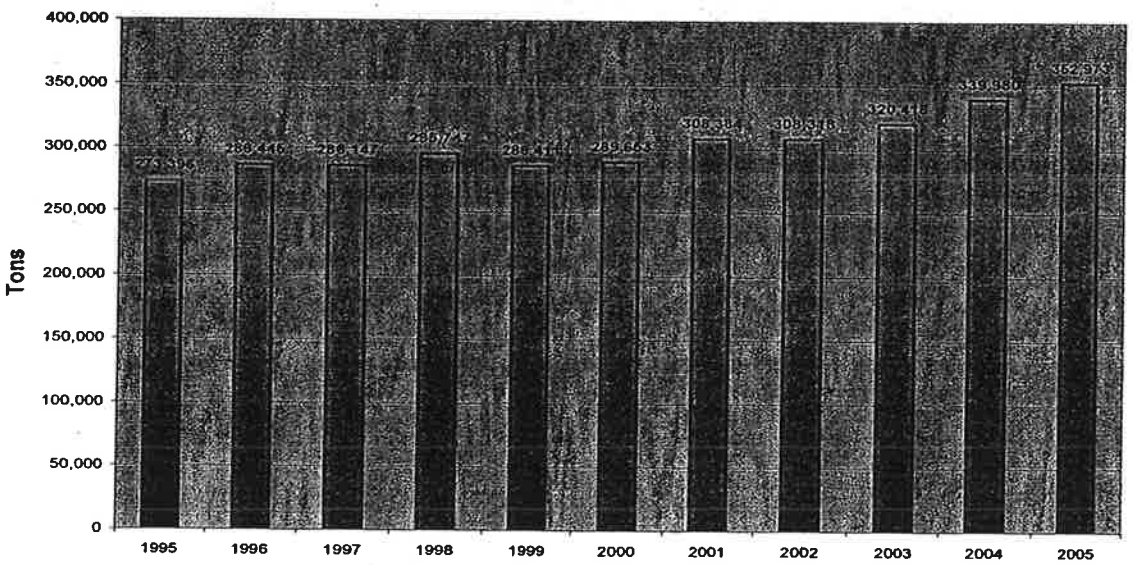
V. DISPOSAL UPDATE

A. Disposal Trend Since 1995

Kern Unincorporated disposal tonnage increased approximately 45,000 tons between the year 1995 and 2005, which is approximately 2% per year. Figure 1 below displays the increased trend of disposal over that period.

Figure 1

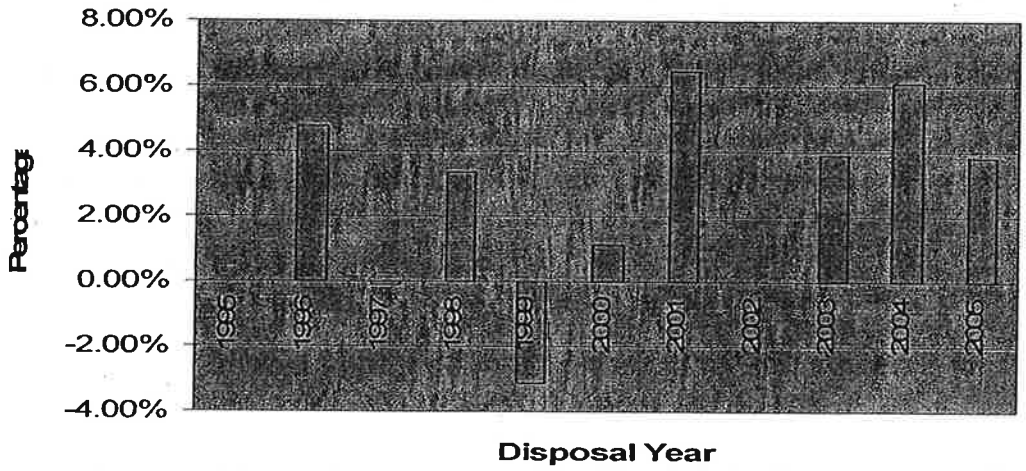
Kern Unincorporated Disposal Tonnage



The increase in tonnage disposed shown above has varied year to year as shown below in figure 2. While the short term growth is higher, (4 to 6 percent), it is anticipated that the long term growth rate will be more in the 3% range.

Figure 2

Disposal Tonnage Growth



VI. ESTIMATED 2004 DIVERSION PERCENTAGE

The estimated diversion percentage for the unincorporated area over the last five years is shown in Table 8.

TABLE 8

ANNUAL DIVERSION RATES FOR UNINCORPORATED KERN COUNTY

	2001	2002	2003	2004	2005*
Waste Generation	635,027	630,550	643,253	771,726	782,651
Disposal Tonnage	308,384	308,318	320,418	339,980	352,973
Diversion Tonnage	326,643	322,318	322,835	431,746	429,678
Diversion Rate	51%	51%	50%	57%	57%

*Figures are estimated pending release of final information from the State of California.

The County continues to maintain a diversion percentage greater than the 50% state mandate. Accomplishing this while disposal has continued to increase over this same period means that diversion efforts are keeping up with the growth. Credit for the success in diversion goes as much to private enterprise as to the

County and other entities acknowledged in this report. All the recycling accomplished by private buy-back centers, metal recyclers, construction material recyclers and many others contribute significantly to our success. In addition, thrift stores and other reuse and reduction efforts are also counted indirectly by the calculation method used by the State to determine diversion percentages.

Beginning in 2004, the California Integrated Waste Management Board allowed jurisdictions to use the Taxable Sales Deflator Index (TSDI) instead of the standard Consumer Price Index (CPI). This change benefited the County as it uses a more accurate reflection of sales information thereby producing a more accurate waste generation number. Using that information, the County was able to more accurately report the higher waste generation number which has the effect of increasing the diversion percent.

The diversion status of the cities in Kern County and other counties and cities in California are included as attachments to this report.

VII. DEPARTMENT'S PLANS FOR INCREASING DIVERSION BEYOND 50%

A. C&D Recycling

The Department, acting on a referral from the Board, formed a C&D Workgroup to evaluate the options available to the County to divert a greater percentage of the C&D waste generated. The workgroup has evaluated educational options, voluntary programs, and possible implementation of various ordinances related to C&D recycling. The work performed by the group will result in recommendations designed to increase overall C&D diversion in the County. That recommendation, when completed, will be brought to the Board for further consideration.

B. Curbside Recycling

Voluntary curbside recycling has been available within the city limits of Bakersfield for three years. The Department approached the local franchise haulers to discuss expansion of the voluntary curbside recycling program into the metropolitan Bakersfield Universal Collection Area. This program was implemented in January 2005 and produced additional recycling for the County of Kern. Further studies regarding this program are currently underway. Options to further increase the amount of material being collected in this program includes additional marketing efforts, additional education, and possibly making the program mandatory. Implementation of any of these options would most likely increase the total tonnage diverted through the program.

It is estimated that if the program were made mandatory in the County areas, the tonnage of material collected per home would approximate the

estimate given by the Department of Conservation of 650 lbs. per household per year, or an average of 25lbs every two weeks. This number is approximately 30% lower than the tonnage currently collected due to the fact that the volunteer users of the service are generally the most aggressive recyclers and tend to have higher recycling rates than the general population.

City

Implementing a mandatory program would have two benefits, the first being the effect the program would have on the County diversion rate. Given the number of homes currently in the Metropolitan Bakersfield Collection Area, 43,800, the per home recycling rate would equate to an annual tonnage of approximately 14,000. In terms of the County of Kern diversion rate, that would be an increase of approximately 2%.

84,100
total
127,900
42,000t

The second benefit would be a marginal increase in the life of the Bena Landfill. Assuming the entire 14,000 tons would be diversion from the Bena Landfill, it would serve to increase the remaining 26-year life of Phase 2A by approximately 8 months.

C. Bakersfield Metropolitan Area Recycling

Interest has arisen among the franchise haulers and City of Bakersfield for a solid waste transfer station in the Bakersfield metropolitan area. A properly located transfer station would save the collection vehicles time and reduce air emissions by consolidating collection truck loads at a facility closer to the haul routes into large trailers for transport to the Bena Sanitary Landfill. Whether the haul cost savings would outweigh the cost of operations is yet to be determined. Transfer stations frequently include recycling activities because once the waste is being handled for transfer it is often cost effective to perform recycling activities that reduce the amount of waste needing to be hauled to disposal.

Consideration of a transfer station, along with the interest in mandatory curbside recycling, dictates the need for a strongly coordinated effort between the County, City and franchise haulers to make sure the services resulting are the most beneficial and cost effective for the residents. The Department is committed to such a coordinated effort. An Ad Hoc Subcommittee to the Solid Waste Management Advisory Committee has been meeting over the last couple of years, specifically for this purpose. An MOU was developed to outline the mutual interest of the City and County to collaborate on the development of these projects. Efforts for obtaining grant funds for the projects have already been made.

No firm decisions about which recycling programs will be implemented or the location of the required facilities has been made, but the Department

will continue to work closely with the City of Bakersfield and the haulers to arrive at final determinations.

D. Transformation/Conversion Technology

The waste management hierarchy promoted by the California Integrated Waste Management Board is:

Diversion:
- Source Reduction
- Reuse
- Recycling/Composting

Disposal:
- Transformation
- Landfill

Thus far, Kern County has focused on all aspects of the hierarchy EXCEPT transformation. Technologies that transform waste to energy have the potential to significantly reduce waste disposal and extend landfill life. However, State law does not allow the disposal reduction from diversion technology to count toward the diversion goal because transformation is categorized as disposal.

The cost for constructing new landfill liner systems has increased by 50% over the past four years. Furthermore, California's legislature for the third consecutive year continues to entertain the prospect of INCREASING the recycling mandate to as high as 75%. Programs such as the ones discussed in this report, no matter how effective, could NOT get us to 75% diversion. For these reasons, it is appropriate that this department open a dialogue about the future of waste management in Kern County, relative to the viability of any of these technologies in helping us contain our costs, and position ourselves to comply with the new mandate being discussed.

Potential technologies are thermal, biological/chemical and physical. Advances and refinements in these technologies are making them more viable and environmentally acceptable. These processes typically involve receipt of waste, removal of recyclables, application of the conversion process, yield of a product (energy), and finally yield of unprocessable residuals needing to be landfilled.

It is important to note that traditional recycling must occur before transformation of waste to some form of energy. This is due to the current law and pressure from the recycling industry.

Presently, these technologies are still much more expensive than landfilling. However, as mentioned earlier, if the recycling mandate is increased, we will be forced to choose a waste management method that is more expensive than landfilling. Consequently, it is imperative that the State reclassify transformation as diversion instead of disposal to allow such an approach to successfully achieve the mandated diversion goal.

The Department has begun to explore alternative technologies. We began in the fall of 2005 with a presentation on the various technologies and their relative cost, to the Solid Waste Management Advisory Committee of the Board of Supervisors. We will continue utilizing the Advisory Committee to explore the technologies, their capital cost, diversion rate, air emissions, annual revenues, throughput and other relevant factors culminating in a separate report to the Board with a recommendation for the long term strategy for waste management in Kern County.

VIII. SUMMARY

Kern County continues to meet the diversion mandate of 50 percent diversion for the unincorporated area. The diversion programs that the Department operates or participates in continue to perform well. Enhancements to existing programs and implementation of new programs are projected to keep the County above the 50% level.

The Department is also evaluating new programs that would allow the County to increase the diversion percentage but there would be substantial costs associated with these programs.

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ATTACHMENT 1

ESTIMATED DIVERSION RESULTS FOR CITIES IN KERN COUNTY* 2004	
City	**Diversion**
Arvin	Under compliance order
Bakersfield	50
California City	43
Delano	45
Maricopa	63
McFarland	34 – Penalty Imposed
Ridgecrest	66
Shafter	65
Taft	72
Tehachapi	70
Wasco	53

* Estimates do not include additional diversion which may be justified due to bio- mass diversion credits

ATTACHMENT 2

CALIFORNIA COUNTIES ESTIMATED DIVERSION RESULTS 2004			
County	%	County	%
Alameda	63	Riverside	51
Alpine	57	Sacramento	30
Amador Waste Agency	Delayed	San Benito	Delayed
Butte Waste Authority	Delayed	San Bernardino	Delayed
Calaveras	Delayed	San Diego	35
Contra Costa Regional Agency	49	San Joaquin	58
Del Norte Waste Authority	46	San Luis Obispo Waste Authority	51
El Dorado	Delayed	San Mateo	Delayed
Fresno	27	Santa Clara	61
Humboldt	73	Santa Barbara	62
Inyo Waste Agency	13	Santa Cruz	Delayed
Imperial	85	Stanislaus Regional Agency	60
Kings Waste Authority	47	Shasta Regional Agency	65
Kern	56	Sierra Regional Agency	32
Lake	Delayed	Siskiyou Regional Agency	53
Lassen Regional Agency	50	Solano	Delayed
Los Angeles	Compliance Order	Sonoma Waste Agency	Delayed
Madera	Delayed	Tehama Regional Agency	45
Marin Waste Authority	91	Trinity	59
Mariposa	Delayed	Tulare	Delayed
Monterey	Delayed	Tuolumne	44
Mendocino	Delayed	Ventura	58
Merced Regional Agency	48	Yolo	64
Modoc	20	Yuba/Sutter Waste Authority	Delayed
Mono	65		
Napa	69		
Nevada	Delayed		
Orange	Delayed		
Placer	58		
Plumas	35		

ATTACHMENT 3

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Adelanto	No Rate
Agoura Hills	37%
Alameda	68%
Alameda-Unincorporated	60%
Albany	70%
Alhambra	50%
Aliso Viejo	26%
Alpine-Unincorporated	44%
Alturas	23%
Amador County Integrated Solid Waste Management Agency	62%
American Canyon	-94%
Anaheim	56%
Angels Camp	11%
Antioch	42%
Apple Valley	34%
Arcadia	65%
Arcata	51%
Arvin	No Rate
Atherton	40%
Auburn	47%
Avalon	56%
Avenal	65%
Azusa	51%
Bakersfield	39%
Baldwin Park	No Rate
Banning	45%
Barstow	54%
Beaumont	63%
Bell	34%
Bell Gardens	49%
Bellflower	42%
Belmont	54%
Benicia	61%
Berkeley	57%
Big Bear Lake	70%
Blue Lake	85%
Blythe	46%
Bradbury	58%
Brawley	48%
Brea	50%
Brentwood	37%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Brisbane	62%
Buellton	47%
Buena Park	47%
Burbank	65%
Burlingame	54%
Butte County Regional Waste Management Authority	34%
Calabasas	45%
Calaveras-Unincorporated	24%
Calexico	40%
California City	43%
Calimesa	43%
Calipatria	47%
Camarillo	56%
Campbell	47%
Canyon Lake	54%
Capitola	48%
Carlsbad	57%
Carmel-by-the-Sea	57%
Carpinteria	56%
Carson	71%
Cathedral City	52%
Cerritos	40%
Chico	51%
Chino	50%
Chino Hills	42%
Chowchilla	57%
Chula Vista	50%
Claremont	56%
Clayton	54%
Clearlake	48%
Clovis	54%
Coachella	53%
Coalinga	-113%
Colfax	70%
Colma	47%
Colton	57%
Colusa County Regional Agency	35%
Commerce	24%
Compton	No Rate
Concord	44%
Consolidated Waste Management Authority	46%
Contra Costa/Ironhouse/Oakley Regional Agency	32%
Corona	51%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Coronado	57%
Costa Mesa	57%
Covina	51%
Cudahy	53%
Culver City	53%
Cupertino	53%
Cypress	65%
Daly City	29%
Dana Point	40%
Danville	56%
Davis	47%
Del Mar	58%
Del Norte Solid Waste Management Authority	46%
Del Rey Oaks	63%
Delano	50%
Desert Hot Springs	17%
Diamond Bar	57%
Dixon	68%
Downey	44%
Dublin	47%
East Palo Alto	84%
El Cajon	52%
El Centro	57%
El Dorado-Unincorporated	30%
El Monte	58%
El Segundo	78%
Elk Grove	48%
Emeryville	66%
Encinitas	55%
Escalon	71%
Escondido	53%
Eureka	43%
Fairfield	62%
Ferndale	29%
Fillmore	36%
Firebaugh	47%
Folsom	41%
Fontana	49%
Fort Bragg	19%
Fortuna	No Rate
Foster City	43%
Fountain Valley	53%
Fowler	79%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Fremont	61%
Fresno	39%
Fresno-Unincorporated	No Rate
Fullerton	56%
Galt	28%
Garden Grove	56%
Gardena	No Rate
Gilroy	52%
Glendale	47%
Glendora	51%
Glenn County Waste Management Regional Agency	47%
Gonzales	45%
Grand Terrace	48%
Grass Valley	49%
Greenfield	37%
Guadalupe	47%
Half Moon Bay	40%
Hawaiian Gardens	40%
Hawthorne	55%
Hayward	49%
Hemet	55%
Hermosa Beach	No Rate
Hesperia	44%
Highland	45%
Hillsborough	46%
Holtville	2%
Humboldt-Unincorporated	73%
Huntington Beach	67%
Huntington Park	54%
Huron	50%
Imperial	49%
Imperial Beach	49%
Imperial-Unincorporated	84%
Indian Wells	64%
Indio	49%
Industry	66%
Inglewood	No Rate
Inyo Regional Waste Management Agency	51%
Irvine	57%
Irwindale	80%
Isleton	60%
Kerman	44%
Kern-Unincorporated	56%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
King City	76%
Kings Waste and Recycling Authority	50%
Kingsburg	57%
La Canada Flintridge	49%
La Habra	53%
La Habra Heights	63%
La Mesa	42%
La Mirada	54%
La Palma	72%
La Puente	51%
La Quinta	67%
La Verne	55%
Lafayette	52%
Laguna Beach	46%
Laguna Hills	33%
Laguna Niguel	52%
Laguna Woods	51%
Lake Elsinore	24%
Lake Forest	68%
Lakeport	56%
Lake-Unincorporated	43%
Lakewood	38%
Lancaster	42%
Lassen Regional Solid Waste Management Authority	38%
Lathrop	80%
Lawndale	32%
Lemon Grove	52%
Lincoln	60%
Livermore	53%
Lodi	58%
Loma Linda	41%
Lomita	45%
Lompoc	61%
Long Beach	52%
Loomis	40%
Los Alamitos	35%
Los Altos	54%
Los Altos Hills	57%
Los Angeles Area Integrated Waste Management Authority	No Rate
Los Angeles-Unincorporated	15%
Los Gatos	56%
Madera	51%
Madera-Unincorporated	39%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Malibu	47%
Mammoth Lakes	44%
Manteca	38%
Maricopa	67%
Marin County Hazardous and Solid Waste Management Authority	53%
Marina	64%
Mariposa-Unincorporated	47%
Martinez	32%
Maywood	45%
McFarland	42%
Mendocino-Unincorporated	21%
Mendota	40%
Menlo Park	53%
Merced County Solid Waste Regional Agency	50%
Millbrae	62%
Milpitas	54%
Mission Viejo	48%
Modesto	44%
Modoc-Unincorporated	3%
Mono-Unincorporated	66%
Monrovia	54%
Montclair	51%
Monte Sereno	78%
Montebello	61%
Monterey	67%
Monterey Park	61%
Monterey-Unincorporated	57%
Moorpark	58%
Moraga	57%
Moreno Valley	47%
Morgan Hill	51%
Mountain View	58%
Murrieta	36%
Napa	3%
Napa-Unincorporated	14%
National City	53%
Needles	21%
Nevada City	71%
Nevada-Unincorporated	27%
Newark	61%
Newport Beach	54%
Norco	54%
Norwalk	40%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Oakland	48%
Oceanside	47%
Ojai	39%
Ontario	46%
Orange	55%
Orange Cove	87%
Orange-Unincorporated	29%
Orinda	50%
Oroville	38%
Oxnard	69%
Pacific Grove	61%
Pacifica	38%
Palm Desert	67%
Palm Springs	65%
Palmdale	56%
Palo Alto	62%
Palos Verdes Estates	52%
Paramount	40%
Parlier	72%
Pasadena	59%
Perris	39%
Pico Rivera	52%
Piedmont	65%
Pittsburg	54%
Placentia	55%
Placer-Unincorporated	56%
Placerville	63%
Pleasant Hill	38%
Pleasanton	40%
Plumas-Unincorporated	37%
Point Arena	-21%
Port Hueneme	22%
Portola	28%
Portola Valley	67%
Poway	64%
Rancho Cucamonga	42%
Rancho Mirage	55%
Rancho Santa Margarita	31%
Redding	56%
Redlands	46%
Redwood City	61%
Reedley	69%
Rialto	50%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Ridgecrest	70%
Rio Dell	17%
Rio Vista	65%
Ripon	76%
Riverside	62%
Riverside-Unincorporated	51%
Rocklin	58%
Rolling Hills	37%
Rolling Hills Estates	44%
Roseville	50%.
Sacramento	48%
Sacramento County/City of Citrus Heights Regional Agency	60%
Salinas	57%
San Benito County Integrated Waste Management Regional Agency	42%
San Bernardino	52%
San Bernardino-Unincorporated	45%
San Bruno	44%
San Buenaventura	66%
San Carlos	46%
San Clemente	43%
San Diego	52%
San Diego-Unincorporated	44%
San Dimas	71%
San Fernando	69%
San Francisco	63%
San Gabriel	39%
San Jacinto	44%
San Joaquin	43%
San Joaquin-Unincorporated	62%
San Jose	62%
San Juan Capistrano	49%
San Leandro	40%
San Luis Obispo County Integrated Waste Management Authority	58%
San Marcos	43%
San Marino	38%
San Mateo	49%
San Mateo-Unincorporated	56%
San Ramon	49%
Sand City	59%
Sanger	50%
Santa Ana	60%
Santa Barbara	50%
Santa Barbara Regional Integrated Waste Mgmgt. Reporting Authority	48%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Santa Clara	53%
Santa Clara-Unincorporated	62%
Santa Clarita	38%
Santa Cruz	55%
Santa Cruz-Unincorporated	48%
Santa Fe Springs	79%
Santa Maria	39%
Santa Monica	62%
Santa Paula	39%
Santee	49%
Saratoga	67%
Scotts Valley	66%
Seal Beach	61%
Seaside	52%
Selma	62%
Shafter	69%
Shasta County Waste Management Agency	61%
Sierra County Regional Agency	30%
Signal Hill	43%
Simi Valley	55%
Siskiyou County Integrated Solid Waste Management Regional Agency	29%
Solana Beach	56%
Solano-Unincorporated	55%
Soledad	49%
Solvang	53%
Sonoma County Waste Management Agency	56%
Sonora	67%
South El Monte	77%
South Lake Tahoe	59%
South Pasadena	47%
South San Francisco	44%
Stanislaus County Regional Solid Waste Planning Agency	54%
Stanton	42%
Stockton	53%
Suisun City	55%
Sunnyvale	61%
Taft	75%
Tehachapi	74%
Tehama County Sanitary Landfill Regional Agency	45%
Temecula	46%
Temple City	60%
Thousand Oaks	58%

CALIFORNIA CITIES ESTIMATED DIVERSION RESULTS 2004	
Jurisdiction	**Maximized Using TSDI**
Tracy	59%
Trinidad	47%
Trinity-Unincorporated	60%
Truckee	68%
Tulare-Unincorporated	49%
Tuolumne-Unincorporated	44%
Tustin	12%
Twentynine Palms	65%
Ukiah	31%
Union City	46%
Upland	50%
Upper Valley Waste Management Agency	59%
Vacaville	53%
Vallejo	50%
Ventura-Unincorporated	39%
Vernon	48%
Victorville	42%
Villa Park	59%
Vista	46%
Walnut	59%
Walnut Creek	50%
Wasco	58%
Watsonville	71%
West Contra Costa Integrated Waste Management Authority	37%
West Covina	55%
West Hollywood	51%
West Sacramento	54%
Westlake Village	69%
Westminster	61%
Westmorland	-5%
Whittier	58%
Willits	10%
Winters	53%
Woodland	38%
Woodside	73%
Yolo-Unincorporated	66%
Yorba Linda	55%
Yuba/Sutter Regional Waste Management Authority	46%
Yucaipa	46%
Yucca Valley	62%

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Appendix D

County of Kern Recycling and Solid Waste Planning Progress Report

Attachment 1

KERN COUNTY WASTE MANAGEMENT

County of Kern Recycling & Solid Waste Planning Progress Report

Prepared by:
HF&H Consultants, LLC

October 6, 2009

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October 6, 2009

Mr. Doug Landon
Director
Kern County Waste Management Department
2700 "M" Street, Suite 500
Bakersfield, CA 93301

Subject: Recycling and Solid Waste Planning Progress Report

Dear Mr. Landon:

HF&H Consultants, LLC (HF&H) is pleased to present you with the attached "Recycling and Solid Waste Planning Progress Report" documenting the first phase of Kern County's (County) Recycling and Solid Waste Planning Project. This report summarizes the efforts of a large number of individuals representing twenty organizations, all with a interest in the future of the recycling and solid waste system in the County. Without the involvement of these key stakeholders, neither HF&H nor the County would have made the progress that we have. HF&H would like to thank all of the participants in this process for their generous provision of time and expertise.

HF&H would particularly like to thank:

- **Jacob Panero** of Varner Brothers and Metropolitan Recycling Corporation, **Paul Benz** of Benz Sanitation, **Larry Moxley** of Kern Refuse Disposal, **Bob Hampton** of Westside Waste Management, and **Kevin Barnes** of the City of Bakersfield all of whom brought their experience with day to day operations to inform the working groups of the practical realities of the waste management system in the County;
- **Supervisors Don Maben and Jon McQuiston**, Bakersfield City Councilman **Ken Weir**, and SWMAC Chair **Michael Geyer** for their guidance and leadership through this process;
- The Cities of Arvin, Bakersfield, California City, Delano, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and Wasco for providing their perspectives and support for this process, without which the County's goal would be unattainable; and,
- The staff of the Kern County Waste Management Department who have provided the key data which underlies the planning effort and been primarily responsible for coordinating and facilitating the planning process among the numerous organizations involved.

* * * * *

We truly appreciate the opportunity to be of assistance to the County on this important project. If you have any questions or concerns regarding this report, please contact Bob Hilton directly at (925) 977-6952 or Rob Hilton at (925) 977-6959.

Very truly yours,
HF&H CONSULTANTS, LLC

Robert D. Hilton, CMC
President

Robert C. Hilton
Senior Associate

cc: Nancy Ewert, KCWMD

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ATTACHMENTS

Attachment 1 – Preliminary Alternatives and Evaluation Criteria
Attachment 2 – Program and Facility Alternative Descriptions
Attachment 3 – Cost-Benefit Analysis Summary
Attachment 4 – Evaluation Matrix

SECTION 1: EXECUTIVE SUMMARY

The Kern County Waste Management Department (KCWMD), working with the Kern County Solid Waste Management Advisory Committee (SWMAC) and with assistance from HF&H Consultants (HF&H), is in the process of developing a Recycling and Solid Waste System Plan (System Plan) that will guide KCWMD's efforts until 2020. This report describes the progress of the first phase of this planning process and presents the resulting key policy issues for consideration by the Kern County Board of Supervisors (Board). A more comprehensive final report will be prepared and presented to the Board following the completion of detailed implementation-level planning, described in more detail in Section 5 of this report.

Summary of Process

In 2008, the Board requested that KCWMD work with HF&H and the SWMAC to develop a plan for the County's solid waste management system. This plan has been developed for and by the County as a planning tool and makes no commitments regarding implementation of any part of this plan by the County or by any incorporated city within the County. County landfills manage the waste of both the unincorporated as well as the incorporated areas of the County; because of this and in order to capitalize on opportunities for improved economies of scale, the County has invited the incorporated cities and private haulers to participate in this planning process. While many of the cities have been involved in the planning process and are interested in coordinating with the County on these efforts to varying degrees, none of them have made any commitments towards implementation of this plan.

Due to the size of the County and the significant variation in population density, climate, and existing infrastructure, from one region of the County to another each part of this project was performed for separate regions of the County. These regions are:

- **West –** West of Interstate 5 and north of Highway 166.
- **Central –** East of Interstate 5, south of 7th Standard Road, and west of the Tehachapi Mountains.
- **North Central –** East of Interstate 5, north of 7th Standard Road, and west of Highway 65.
- **East –** East of the Tehachapi Mountains including Lake Isabella and Kern River Valley.

The process for the first phase of developing the System Plan consisted of three major elements:

1. HF&H conducted a **baseline analysis** to understand the current flow of materials generated in each of the regions in the County into existing recycling programs and facilities and landfills. This baseline analysis identified both the programs in the County that are currently very successful (e.g. self-haul recycling at transfer stations, the metro-area's green cart program, the MRC C&D facility, Tehachapi Recycling) as well as the materials that remain in high quantities in the disposal stream (e.g. organics, traditional recyclables, construction debris). This baseline analysis is described in more detail in Section 2.
2. HF&H identified a comprehensive list of more than 60 **policy, program, and facility alternatives** that might be implemented in the County as part of the System Plan. These alternatives were screened by HF&H to identify alternatives that best met the community's needs based on the interviews with the Board and industry representatives within the County. This screening process resulted in 20

alternatives that were more thoroughly analyzed by HF&H to understand the range of costs, tonnage, and air emissions resulting from each alternative. HF&H conducted an independent evaluation of the alternatives relative to eleven different criteria. The identification, analysis, and evaluation of the policy, program, and facility alternatives is detailed in Section 3 and Attachments 1 through 4.

3. KCWMD staff assembled working groups that represented each region of the County to design **regional planning portfolios** which form the foundation of the System Plan. The working groups were comprised of Board members, County staff, haulers, and staff and elected officials from incorporated cities. The working groups reviewed the alternatives, discussed the application of programs in light of the local conditions in their region, and determined which alternatives were appropriate for the portfolio of policies, programs, and facilities in their region.

Questions and Recommendations

Upon completion of the first phase of the planning process, KCWMD, SWMAC, and HF&H (Planning Team) identified four key questions to be considered by the Board prior to proceeding in the next phase of the planning process. Each of the questions is listed below and followed by the recommendation of the Planning Team.

1. What should be the goal of the System Plan?

In compliance with the Board's guidance for no new landfills, the Planning Team recommends that the goal, for planning purposes, of the System Plan should be to achieve a 75% diversion rate by 2020 by implementing affordable, cost-effective programs and ensuring compliance with the current and foreseeable future regulatory requirements related to operating a waste management system.

2. What basic principles should guide the development of the System Plan?

In designing the portfolios and developing the specific implementation approach for each program, the Planning Team recommends that the following four basic principals be used to guide the process:

1) Understand and anticipate the legislative and regulatory trends that will impact the implementation and execution of the System Plan.

2) Allow for flexibility over time by using a phased approach to the implementation of programs and facilities.

3) Minimize implementation cost and delays by leveraging existing infrastructure where possible and developing facilities which are relatively easy to permit.

4) Implement programs and facilities which promote the highest value and best use of recyclable materials as commodities.

3. What collection strategies and facility infrastructure should form the foundation of the System Plan?

The Planning Team recommends that the System Plan be based on collecting source separated materials from customers and processing materials to promote the highest value of the resulting commodity streams (e.g. Clean Material Recovery Facilities and Compost Sites).

4. What major policy items should be included in the System Plan?

The Planning Team has considered a number of new policies (e.g. Landfill Bans, Local Retailer Responsibility, Mandatory MRF First, and C&D Ordinance) and recommends that no new formal policies or ordinances be adopted by the Board as part of the System Plan. Instead, the Planning Team recommends that the existing Board guidance of "No New Landfills" from the Infrastructure Plan be maintained to guide KCWMD.

Policy, Program, and Facility Recommendations

As a result of the meetings between KCWMD and the regional working groups, recommendations have been developed for the policies, programs, and facilities that form the foundation of the System Plan. Detailed recommendations can be found in Section 4, however, the working groups have generally recommended that:

1. The County establish a planning goal of achieving a 75% diversion rate by 2020.
2. The County's recycling processing infrastructure include one or more "clean" material recovery facilities (MRF).
3. Universal residential curbside recycling be provided to all single- and multi-family dwellings, at least, within existing universal service areas (except in the West Region, where curbside recycling has been identified for "later" implementation).
4. Single-stream and source separated recycling be offered to all businesses within the County, subject to the requirements of the AB 32 Scoping Plan regulations for "Mandatory Commercial Recycling".
5. A pricing incentive (e.g. surcharge for mixed recyclables) be created at the landfills and transfer stations throughout the County to encourage the recycling of construction and demolition debris (C&D) through the MRC and the Tehachapi MRF.
6. The recycling areas at the County's landfills and transfer stations include expanded recycling opportunities (i.e. similar to the McFarland/Delano or Lebec Transfer Stations) to help residents and businesses improve recycling of self-haul materials.
7. The Board adopt no new formal policies (e.g. Landfill Bans, MRF First, C&D Ordinance, Local Retailer Responsibility) or ordinances as part of this System Plan, except for those which the Board is likely to be required to implement by pending regulatory processes (e.g. AB 32 requiring a Mandatory Commercial Recycling Ordinance).

Next Steps

Following the input provided by the Board and any revisions to the plan that result from that input, the next steps for this process include updating the city councils throughout the County on this process and conducting the detailed implementation-level planning process. This implementation-level planning will include development of County-specific cost estimates for selected facilities and programs and an evaluation of the funding mechanisms used to pay for them. It is anticipated that each jurisdiction will be interested in reviewing costs prior to any implementation decisions.

SECTION 2: BASELINE ANALYSIS

Overview

The first step in the planning process involved gathering information describing the current state of the waste management system in the County in order gain a better understanding of the challenges and opportunities. To do this, HF&H:

- Reviewed existing County strategy documents (i.e. Burn Dump Remediation Strategy, Household Hazardous Waste Strategy, Infrastructure Plan, and Waste Diversion Plan) to understand the current path of the County's waste management system;
- Documented and analyzed recent disposal trends and permitted landfill capacity;
- Gathered available data about recent material recovery programs, trends, and markets;
- Projected system demand for both disposal and material recovery, based on projected population growth, to the year 2020; and,
- Conducted a focused waste characterization study throughout the County to understand the remaining materials in the waste stream after accounting for the effects of existing diversion programs.

Key Findings

From the information gathered and the analysis performed as part of the baseline analysis, HF&H found the following:

1. Overall, annual demand for materials management via landfill disposal or material recovery is projected to increase by more than 32% by 2020, adding more than 366,000 tons to the system, over 246,000 tons (67%) of which is projected to be landfilled (under current conditions).
2. The County appears to have sufficient system-wide disposal capacity during the planning period (through 2020).
3. If none of the East County landfills receive permit and physical expansions, the East Region area is projected to exhaust the current permitted disposal capacity during 2017. However, KCWMD is moving forward to expand the Ridgecrest and Mojave-Rosamond Sanitary Landfills.
4. While some programs (e.g. Delano Universal Blue-Cart) appear to be more successful than others (e.g. Bakersfield Voluntary Blue-Cart) in removing traditional recycling materials, significant opportunities remain for removing these materials from the residential sector waste stream through expansion of universal programs throughout the County.
5. Consistently, in each region of the County, nearly half of the commercial sector waste stream, that is currently disposed of in landfills, is comprised of traditional recycling materials. Therefore, significant diversion opportunities are available in this sector and facility and program development targeted at these material types should be a high priority.

6. Traditional recycling materials (i.e. paper, cardboard, glass, plastic, and metals) are the most prevalent materials in the County's waste stream that are being disposed. Programs targeting these materials have the potential to divert the greatest amount of material.
7. As a whole, the organics diversion programs and facilities available in the metro-Bakersfield area appear to be the most effective at diverting compostable organics (e.g. leaves, brush, grass, branches, etc.) from disposal. With nearly a quarter of the County waste stream comprised of organics, programs targeting these materials, particularly where they are generated in large quantities, should be included in the System Plan.
8. While construction activity has slowed significantly in recent years, C&D materials still represent nearly 20% of the remaining waste stream. Programs and facilities targeting these material types would be capable of diverting significant volumes of material currently.

Demand and Capacity Analysis

Data Sources

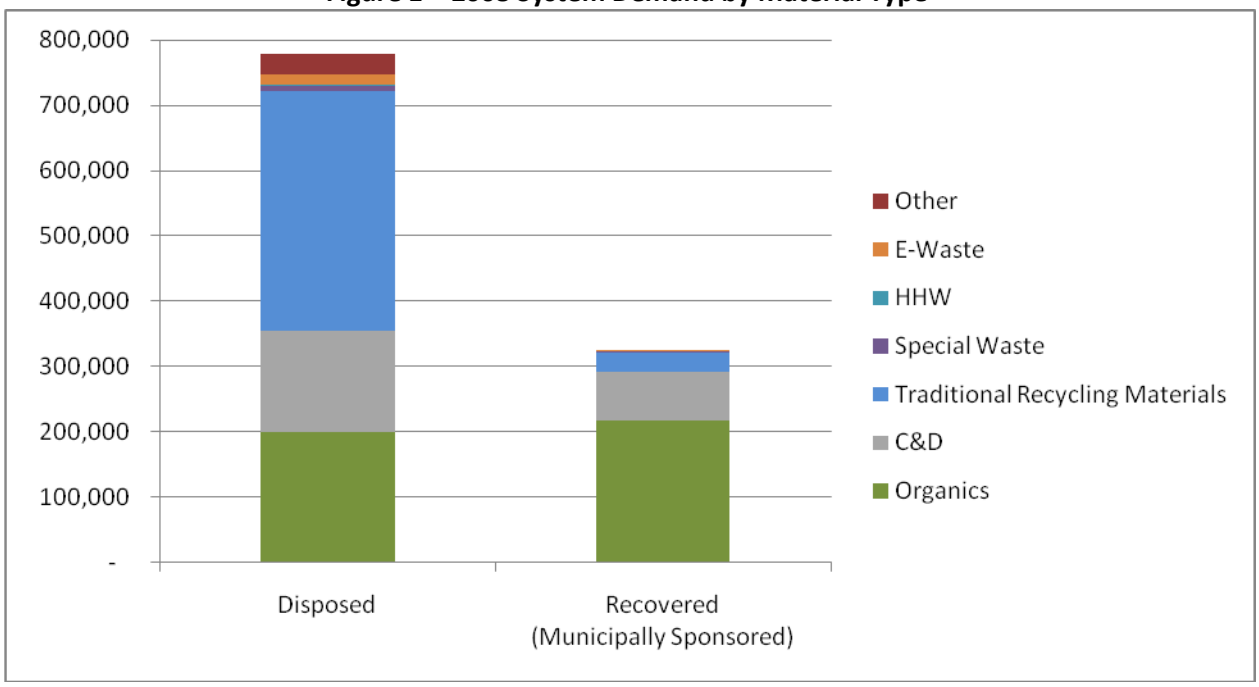
HF&H obtained recent historical (2001 through 2008) disposal data and permitted capacity for each landfill and transfer station in the County from KCWMD. HF&H also gathered material recovery data from KCWMD as well as other cooperative sources (e.g. City of Bakersfield, Community Recycling, Metropolitan Recycling Company (MRC), Tehachapi MRF). This data established a baseline for the number of tons of each material type being handled at each facility within the County.

HF&H obtained (from the State of California, Department of Finance) actual population data for the years 2000 through 2008 and projected populations for 2009 through 2020 for each city in the County as well as the unincorporated area of the County. HF&H used this population projection information as the basis for projecting growth of demand for each region.

System Demand

From the baseline disposal and material recovery data obtained by HF&H during the data gathering process described above, HF&H was able to calculate the volume of materials being recovered each year by material type. Figure 1 below presents the current disposal and material recovery activity in the County's system. The "Recovered" bar demonstrates the actual materials being collected and recycled in 2008. The "Disposed" bar represents the total materials being disposed in the County in 2008 and is segmented to demonstrate the estimated amount of each material type remaining in that disposed stream based on the waste characterization study. This figure demonstrates that while the County is diverting a significant volume of organics and C&D, these materials are still present in significant volumes in the disposed stream. The figure further demonstrates the significant remaining opportunities to collect traditional recycling materials.

Figure 1 – 2008 System Demand by Material Type



The data for Figure 1 above is based on information that was made available to HF&H during the data gathering process and typically represents materials derived from programs operated or contracted-for by the County or one of the cities (municipally sponsored programs). The data that was made available from private recyclers (e.g. Golden State Metals, BARC, Smurfit, and Liberty Composting) was material delivered from County facilities to the recyclers. Information from the City of Bakersfield Compost Facility, the Community Recycling Compost Facility, the MRC C&D facility, and the Tehachapi MRF were also included.

Significant additional recycling activity is occurring in the private sector and outside of the influence or control of municipal programs. For example, in the C&D waste stream, municipally sponsored programs are recovering approximately 76,000 tons and disposing of 155,000 annually. A 2008 review by KCWMD and a SWMAC working group identified the C&D generation rate at 600,000 to 700,000 tons per year, just for the metropolitan Bakersfield area. This would indicate that as many as 469,000 tons per year are being recovered through the private sector. For example, Granite Construction routinely recycles materials like concrete, asphalt, and rebar. Similar, although probably less significant, conditions may exist in commercial and self-haul recycling.

Figure 2 below presents the projected system demand on existing disposal facilities in each region while Figure 3 presents the demand on material recovery. These projections assume no change to the system (e.g. added/cancelled programs, added/closed facilities, improved education and outreach, etc.) or customer behavior. The increase in demand results solely from projections of population growth over the planning period. Overall, demand for materials management via landfill or material recovery is projected to increase more than 32%, adding more than 366,000 tons each year to the system, over 246,000 tons (67%) of which is projected to be landfilled.

Figure 2 – Disposal Demand Projection 2008 – 2020

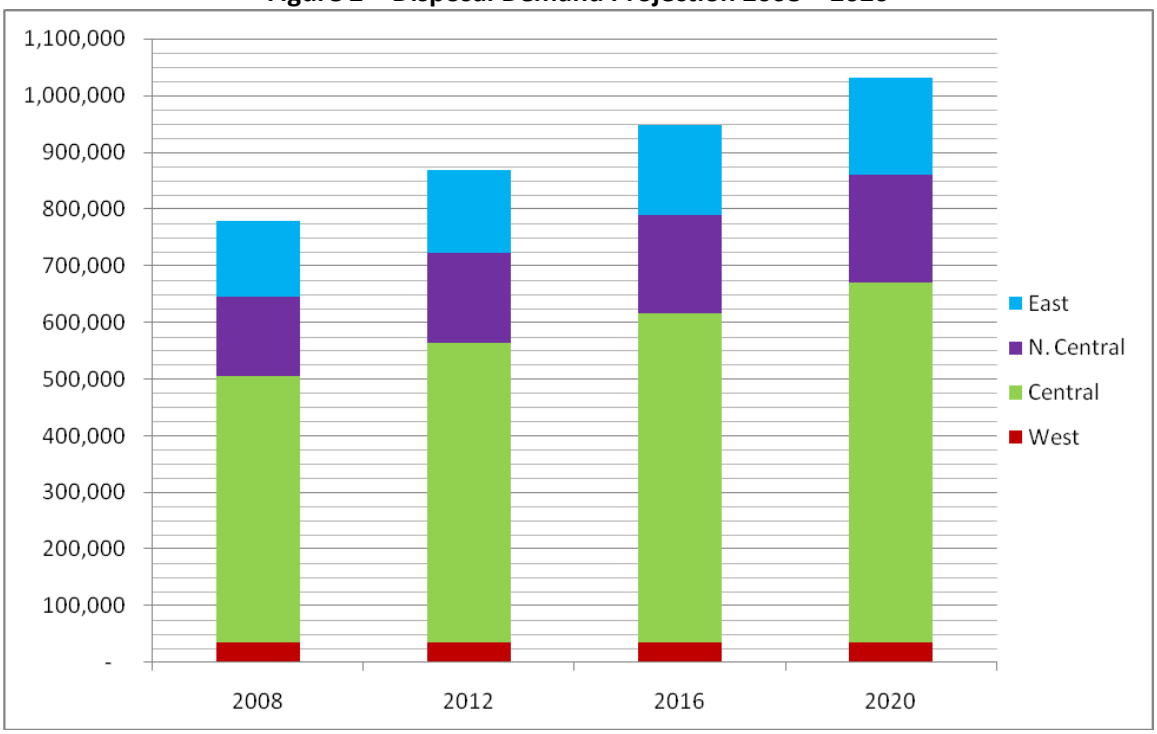
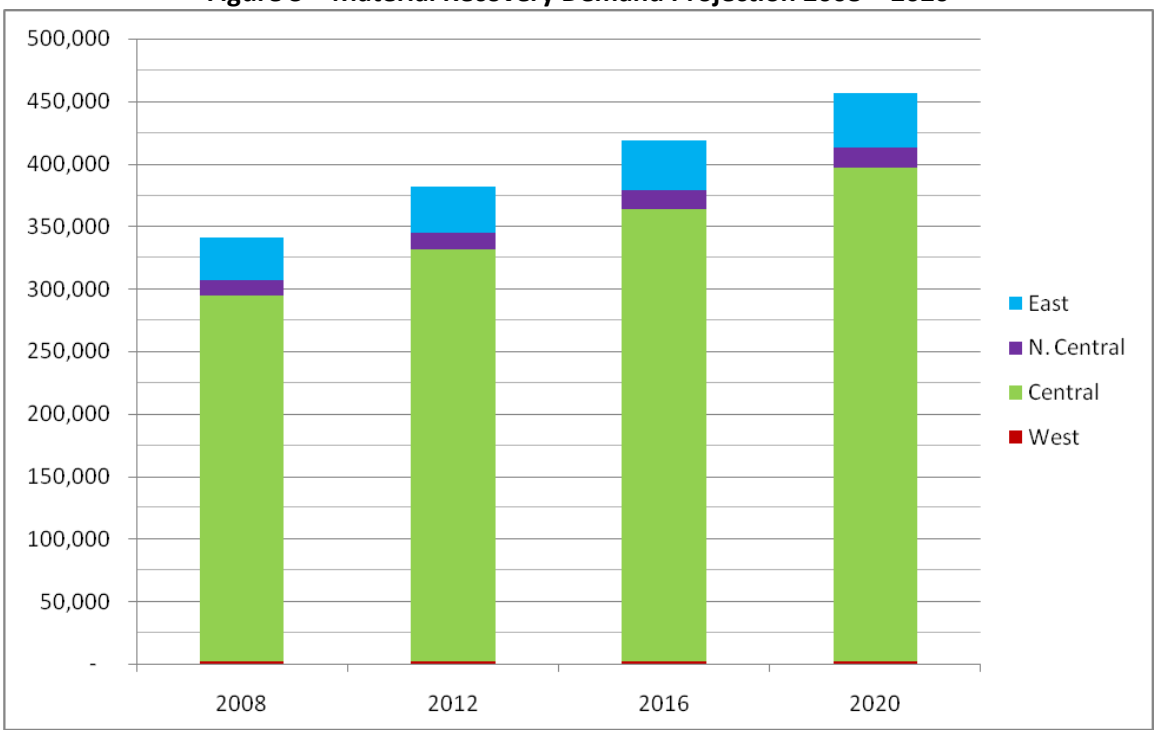


Figure 3 – Material Recovery Demand Projection 2008 – 2020



While Figure 3 appears to demonstrate no material recovery activity in the West Region, this is a result of the scale of the chart. The West Region currently recovers 2,245 tons per year and this is expected to grow to approximately 2,300 tons per year by 2020.

Waste Characterization Analysis

Waste characterization studies are routinely performed as a part of integrated waste management planning. These studies are intended to analyze the materials being sent for disposal to determine what types and relative quantities of each material type remains in the waste stream. This specific waste characterization study performed under the supervision of HF&H was designed to look at four specific parts of the County that utilize different diversion programs. This targeted approach was selected in order to identify where opportunities exist for additional diversion given existing programs. Specifically, waste characterization data was collected to understand the disposed stream after the effects of: the City of Delano's "Universal Blue-Cart" program; the metro-Bakersfield area's "Voluntary Blue-Cart" program, the City of Tehachapi's "MRF First" program; and, the City of Ridgecrest's "CRV Drop-Off" program.

Methodology

The study methodology, including randomization procedures, generator types, sample sizes, material types, and sorting process were established to be consistent with the methodology used by the California Integrated Waste Management Board (CIWMB) during the conduct of their periodic statewide waste characterization studies. The primary difference from the CIWMB methodology was that the limited study performed as part of this planning process was not designed to gather sufficient samples to be statistically significant in its findings. The material types remaining in Kern County's overall waste stream, as indicated by this study, are very close to the state averages in each of the ten material types studied. Where differences exist, they are logically explained by differences in programs or other factors unique to the County. This similarity tends to reinforce the validity of the study's design, methodology, and results.

Results

Figure 4 below presents the aggregated results of the waste characterization study for the three largest constituent material types of the waste stream at each sampling location and compares them to the results of the 2004 statewide waste characterization study performed by the CIWMB.

Figure 4 – Key Overall Waste Characterization Results

Material	Bena	Delano	Tehachapi	Ridgecrest	Kern Co.	Statewide
Traditional Recycling Materials*	45%	**38%**	46%	45%	43%	41%
Compostable Organics**	**19%**	34%	38%	22%	24%	26%
Construction & Demolition	19%	18%	**11%**	19%	18%	22%

*Paper, cardboard, plastic, glass and metal
**Leaves, grass, brush, and food

- Traditional Recycling Materials: Delano has the lowest percentage of traditional recycling materials remaining in the waste stream, and is lower than both the state and County averages. As a whole, Delano's "Universal Blue-Cart" program appears to be highly effective in reducing the presence of these materials from the waste stream. Traditional recycling materials are the most prevalent material remaining in the waste stream in the County. Programs targeting these materials are likely to divert the greatest tonnage

- Compostable Organics: Bena/Metro-Bakersfield has the lowest percentage of compostable organics in the waste stream, outperforming both the County and state averages. As a whole, the programs and facilities available in the metro-Bakersfield area appear to be highly effective at diverting compostable organics from disposal. With nearly a quarter of the remaining County waste stream comprised of organics, programs targeting these materials, particularly where they are generated in large quantities, should logically be included in the System Plan.
- Construction & Demolition: Tehachapi has the lowest percentage of C&D materials remaining in the waste stream, demonstrating significantly higher diversion of these materials than both the state and County averages. This diversion is likely the result of a majority of material generated in the area being processed through the Tehachapi MRF which targets the heavy and highly recoverable materials that comprise C&D. While construction activity has slowed significantly in recent years, these materials still represent nearly 20% of the remaining waste stream. Programs targeting these material types are capable of diverting significant volumes of material. Implementation of these programs prior to the next building cycle will allow the programs to mature and be more effective when building activity resumes.

SECTION 3: POLICIES, PROGRAMS, AND FACILITIES

Options Selected

The second step in the planning process was to identify and begin to evaluate potential policies, programs, and facilities which would later be combined to develop regional planning portfolios. HF&H drafted a preliminary list of 64 alternatives (included as Attachment 1) that could be used to develop the planning portfolios. The alternatives were narrowed – on the basis of diversion potential, community acceptability, and Board priorities (e.g. hazardous waste exclusion, illegal dumping, etc.) – to a list of 20 for use during the planning process. Figure 5 below presents the resulting list of alternatives which have been considered in developing the regional planning portfolios.

Figure 5 – Policy, Program, and Facility Alternatives List

Target Sector	Policy, Program, or Facility Alternative
Policies/Facilities	MRF First
	Conversion Technologies
	Landfill Bans
	Local Retailer Responsibility
	MSW Composting
	No New Landfills
Residential	Single-Family Curbside Three Stream Collection*
	Multi-Family Recycling*
	Curbside e-waste & u-waste
Commercial	Voluntary Commercial Recycling*
	Mandatory/Universal Commercial Recycling*
	Large Generator Technical Assistance
	Large Event & Venue Recycling
	Commercial Food Waste
	Commercial Wet/Dry Collection
Self Haul	Resource Recovery Park (Convenience)
	Reuse Store
C&D	C&D Recycling/ Price Incentive
Illegal Dumping	Commercial Bulky Item Collection
	Multi-Family Bulky Item Collection

* Requires use of clean material recovery facility(ies).

Detailed descriptions of each alternative were provided to the SWMAC prior to its review of the alternatives (these descriptions are included in Attachment 2). No economic policies or strategies have been included in this list, as those issues will be separately addressed during the implementation phase of the System Planning effort. These alternatives are not mutually exclusive and, in some cases, if a policy is implemented, operational and educational programs and infrastructure would be required

Cost-Benefit Analysis Process

As part of the planning process, HF&H developed a cost-benefit analysis (Attachment 3). This analysis was intended as a tool to assist the Planning Team in making planning-level decisions regarding the selection of appropriate alternatives for the System Plan. The analysis considers two quantitative factors:

1) Diversion potential (measured by tons per year); and,

2) Cost effectiveness (measured by the cost per diverted ton).

The estimates presented are not intended to calculate the precise results of an alternative at the same level as is typically done during budgeting or requesting proposals or bids. Instead, HF&H has estimated a reasonable range for each of these measurements on the basis of the performance of these alternatives in other communities for which data was available. These planning-level estimates were intended to provide enough information for the Planning Team to evaluate the relative merits of each alternative in the development of the System Plan.

Preliminary Cost Estimates

HF&H estimated the incremental additional system cost incurred per diverted ton resulting from each alternative. All capital expenses were included as a depreciation expense amortized over the asset's normal useful life. All administrative labor expenses were calculated using County staffing costs as that data was readily available. However, actual program administration may be performed by a number of parties including a hauler, a non-profit group, or a third-party contractor. These details will be resolved during the implementation planning phase.

The cost estimates do not account for savings derived from avoiding disposal operations costs. Because the County owns the landfills, the cost of operating these facilities will continue to be incurred. To the extent that alternatives are successful in diverting sufficient material from landfill disposal to reduce the operational requirements of the landfills, those alternatives may result in greater cost-effectiveness than is represented in our estimates. Such savings may result from reduced operational requirements at the landfill or delays in capital expenditures for closure and new cell development.

Cost estimates are not inclusive of any indirect implementation cost associated with the development of implementation plans, general plan amendments, conduct of feasibility studies, or the process of procuring and negotiating the contracts associated with the alternative. These are anticipated to be one-time costs incurred by the County and/or an incorporated city. More precise cost estimates will be prepared during the implementation planning phase once decisions are made on issues such as facility ownership, program operations, and education and outreach.

Preliminary Diversion Estimates

HF&H estimated the incremental additional diversion that may result from the implementation of each alternative. These estimates were made by applying the results of the alternative in other communities to the waste stream in the County (inclusive of all incorporated cities). In some cases, only portions of the County which have economies of scale to support the alternative at a reasonably cost-effective level were considered in the analysis (e.g. no resource recovery park was considered for the Boron Landfill). The analysis accounted for existing diversion (e.g. deducting the tons diverted through the MRC C&D facility) whenever possible. However, there are a number of diversion programs for which data was not available and some double-counting may have resulted (e.g. existing commercial recycling by BARC or Smurfit). Once the planning portfolios were developed, these estimates were revised to reflect conditions in the region and thereby improve the precision of the estimates by planning region.

SECTION 4: REGIONAL PORTFOLIO DESIGN

The last step in the initial phase of developing the System Plan was to design regional planning portfolios. A planning portfolio represents the combination of policies, programs, and facilities which will be implemented to achieve the objectives of the planning effort. Regional portfolios were developed separately for each of four regions of the County to reflect the different characteristics and existing systems in those regions. In order to develop portfolios that would be most effective, working groups were assembled to represent the varied expertise and interests of each region. The working groups had slightly different compositions from region to region, but generally included the local franchised hauler(s), County staff, staff from the incorporated city(ies) in the region, and elected officials from the Board and/or a local City Council.

For each of the regions, programs were assigned to one of three categories: "Early" designates that it will be planned during the current process: "Later" designates that the alternative has not been ruled out, but will not be planned during the next phase of this planning process; and, "Not" designates that the alternative is not recommended for application in the County.

Diversion Goal & Measurement

One of the first tasks of the working groups was to determine the specific targets that the portfolios would need to achieve. Various suggestions were made including compliance with regulatory requirements, 75% diversion, and "Zero Waste". With the County's goal of having no new landfills as well as the recent regulatory and legislative trend for increasing diversion targets, the working groups were not satisfied with compliance with current regulations. The working groups also recognized that "Zero Waste" may be too ambitious and costly for the current planning horizon. Consensus was reached in all four of the regions that 75% diversion by 2020 should be the target of this planning effort.

Using the calculation methodology and jurisdictional targets prescribed by the CIWMB, HF&H calculated the targeted disposal reduction needed for each region to reach the equivalent of 75% diversion based on the most recently available annual reporting cycle (calendar year 2007). For the County to achieve a cumulative 75% diversion rate, disposal would need to be reduced by 384,531 tons (45%) on an annual basis. Figure 6 below demonstrates the tonnage reduction needed from each jurisdiction and region.

Figure 6 – Additional Tons to Achieve Target Diversion Goal by Jurisdiction and Region

West		N. Central		Central		East		
Jurisdiction	Tons	Jurisdiction	Tons	Jurisdiction	Tons	Jurisdiction	Tons	TOTAL
Maricopa	613	Delano	11,268	Arvin	5,750	California City	6,245	
Taft	1,693	McFarland	3,537	Bakersfield	162,507	Tehachapi	5,029	
County	13,681	Shafter*	0	County	95,770	Ridgecrest	5,663	
		Wasco	7,769			County	34,203	
		County	33,063					
TOTAL	**15,988**	**TOTAL**	**55,637**	**TOTAL**	**264,026**	**TOTAL**	**51,139**	**384,531**

* Note: City of Shafter is currently meeting the 75% diversion equivalent, however, they are anticipated to add programs (e.g. Commercial Recycling) that will contribute toward the goal.

West Region

The "West Region" is the area of the County to the west of Interstate 5 and north of Highway 166. This area includes the cities of Maricopa and Taft and unincorporated areas of Buttonwillow, Derby Acres, Ford City, Lost Hills, McKittrick, and Tupman. The portfolio for the West Region is presented in Figure 7 below.

Figure 7 – West Region Planning Portfolio

Target Sector	Policy, Program, or Facility Alternative	Existing	Early	Late	Not
Policies/Facilities	Clean Materials Recovery Facility			✓	
	MRF First				✓
	Conversion Technologies			✓	
	Landfill Bans				✓
	Local Retailer Responsibility				✓
	MSW Composting				✓
	No New Landfills				✓
Residential	Single-Family Curbside Three Stream Collection			✓	
	Multi-Family Recycling			✓	
	Curbside Electronic Waste*	✓		✓	
	Curbside Universal Waste (e.g. flourescent lights)				✓
Commercial	Voluntary Commercial Recycling				✓
	Mandatory/Universal Commercial Recycling		✓		
	Large Generator Technical Assistance	✓		✓	
	Large Event & Venue Recycling		✓		
	Commercial Food Waste			✓	
	Commercial Wet/Dry Collection			✓	
Self Haul	Resource Recovery Park (Convenience)**	✓	✓	✓	
	Reuse Store		✓		
C&D	C&D Recycling/ Price Incentive		✓		
Illegal Dumping	Commercial Bulky Item Collection		✓		
	Multi-Family Bulky Item Collection	✓			

Note: Detailed descriptions of each alternative can be found in Attachment 2.

* Curbside e-waste collection currently exists in areas where bulky-waste programs have been established. Additional items (e.g. small electronics) may be added to curbside programs.

** "Early" assumes enhancements to existing facilities with no capital expenditures. "Later" assumes capital improvements at selected facilities and implementation of separate public self-haul areas to improve safety and increase diversion.

Working Group

- Bob Hampton, Westside Management
- Bob Gorson, City of Taft
- Craig Jones, City of Taft

Central Region

The "Central Region" is the area of the County that is bounded by 7th Standard Road on the North, Interstate 5 on the West, and the Tehachapi range on the East. This area includes the cities of Arvin and Bakersfield and unincorporated areas of metro-Bakersfield, Edison, Frazier Park, Greenfield, Lamont, Lebec, and Oildale . The portfolio for the Central Region is presented in Figure 8 below.

Figure 8 – Central Region Planning Portfolio

Target Sector	Policy, Program, or Facility Alternative	Existing	Early	Late	Not
Policies/Facilities	Clean Materials Recovery Facility		✓		
	MRF First				✓
	Conversion Technologies			✓	
	Landfill Bans				✓
	Local Retailer Responsibility				✓
	MSW Composting				✓
	No New Landfills				✓
Residential	Single-Family Curbside Three Stream Collection	✓	✓		
	Multi-Family Recycling		✓		
	Curbside Electronic Waste*	✓		✓	
	Curbside Universal Waste (e.g. flourescent lights)				✓
Commercial	Voluntary Commercial Recycling				✓
	Mandatory/Universal Commercial Recycling		✓		
	Large Generator Technical Assistance	✓	✓		
	Large Event & Venue Recycling	✓	✓		
	Commercial Food Waste			✓	
	Commercial Wet/Dry Collection			✓	
Self Haul	Resource Recovery Park (Convenience)**	✓	✓	✓	
	Reuse Store		✓		
C&D	C&D Recycling/ Price Incentive	✓	✓		
Illegal Dumping	Commercial Bulky Item Collection			✓	
	Multi-Family Bulky Item Collection	✓			

Note: Detailed descriptions of each alternative can be found in Attachment 2.

* Curbside e-waste collection currently exists in areas where bulky-waste programs have been established. Additional items (e.g. small electronics) may be added to curbside recycling program at a later time if determined to be feasible.

** "Early" assumes enhancements to existing facilities with no capital expenditures. "Later" assumes capital improvements at selected facilities and implementation of separate public "self-haul" areas to improve safety and increase diversion.

Working Group

- Don Maben, County Supervisor
- Ken Weir, City of Bakersfield City Council
- Larry Moxley, Kern Refuse Disposal/MRC
- Jacob Panero, Varner Brothers, Inc.
- Kevin Barnes, City of Bakersfield
- Alan Christainsen, City of Arvin
- Michael Geyer, SWMAC Chair
- Ray Scott, Mountainside Disposal

North-Central Region

The "North Central Region" is the area of the County that is bounded by 7th Standard Road on the South, Interstate 5 on the West, and the Tehachapi range on the East. This area includes the cities of Delano, McFarland, Shafter, and Wasco and the unincorporated areas surrounding those cities. The portfolio for the North Central Region is presented in Figure 9 below.

Figure 9 – North Central Region Planning Portfolio

Target Sector	Policy, Program, or Facility Alternative	Existing	Early	Late	Not
Policies/Facilities	Clean Materials Recovery Facility		✓		
	MRF First				✓
	Conversion Technologies			✓	
	Landfill Bans				✓
	Local Retailer Responsibility				✓
	MSW Composting				✓
	No New Landfills				✓
Residential	Single-Family Curbside Three Stream Collection***	✓	✓		
	Multi-Family Recycling		✓		
	Curbside Electronic Waste*	✓		✓	
	Curbside Universal Waste (e.g. flourescent lights)				✓
Commercial	Voluntary Commercial Recycling	✓			
	Mandatory/Universal Commercial Recycling			✓	
	Large Generator Technical Assistance	✓	✓		
	Large Event & Venue Recycling		✓		
	Commercial Food Waste			✓	
	Commercial Wet/Dry Collection			✓	
Self Haul	Resource Recovery Park (Convenience)**	✓	✓	✓	
	Reuse Store		✓		
C&D	C&D Recycling/ Price Incentive	✓	✓		
Illegal Dumping	Commercial Bulky Item Collection			✓	
	Multi-Family Bulky Item Collection		✓		

Note: Detailed descriptions of each alternative can be found in Attachment 2.

* Curbside electronic waste collection currently exists in areas where bulky-waste programs have been established. Additional items (e.g. small electronics) may be added to curbside recycling program at a later time if determined to be feasible.

** "Early" assumes enhancements to existing facilities with no capital expenditures. "Later" assumes capital improvements at selected facilities and implementation of separate public "self-haul" areas to improve safety and increase diversion.

***Existing programs in Delano and McFarland (mandatory) and recently approved for Wasco (Voluntary).

Working Group

- Jeff & John Martin, American Refuse
- Robert Wilburn, City of McFarland
- Michael James, City of Shafter
- Dan Allen, City of Wasco

East Region

The "East Region" is the area of the County that is bounded by Tehachapi range on the West. This area includes the cities of California City, Tehachapi, and Ridgecrest and the unincorporated areas of Boron, Glenville, Inyokern, Kern Valley, Lake Isabella, Mojave, North Edwards, Randsburg, and Rosamond. The portfolio for the East Region is presented in Figure 10 below.

Figure 10 – East Region Planning Portfolio

Target Sector	Policy, Program, or Facility Alternative	Existing	Early	Late	Not
Policies/Facilities	Clean Materials Recovery Facility		✓		
	MRF First*	✓			✓
	Conversion Technologies			✓	
	Landfill Bans				✓
	Local Retailer Responsibility				✓
	MSW Composting				✓
	No New Landfills				✓
Residential	Single-Family Curbside Three Stream Collection		✓		
	Multi-Family Recycling		✓		
	Curbside Electronic Waste			✓	
	Curbside Universal Waste (e.g. flourescent lights)				✓
Commercial	Voluntary Commercial Recycling				✓
	Mandatory/Universal Commercial Recycling		✓		
	Large Generator Technical Assistance	✓	✓		
	Large Event & Venue Recycling		✓		
	Commercial Food Waste			✓	
	Commercial Wet/Dry Collection			✓	
Self Haul	Resource Recovery Park (Convenience)**	✓	✓	✓	
	Reuse Store		✓		
C&D	C&D Recycling/ Price Incentive	✓	✓		
Illegal Dumping	Commercial Bulky Item Collection			✓	
	Multi-Family Bulky Item Collection		✓	✓	

Note: Detailed descriptions of each alternative can be found in Attachment 2.

* The existing program is not a "MRF First" policy, as described in the program description, but a program performed by the hauler using the Tehachapi MRF.

** "Early" assumes enhancements to existing facilities with no capital expenditures. "Later" assumes capital improvements at selected facilities and implementation of separate public "self-haul" areas to improve safety and increase diversion.

Working Group

- Don Maben, County Supervisor
- Paul Benz, Benz Sanitation
- Linda Lundsford, City of California City
- Michael Bevins, City of California City
- Jim McRae, City of Ridgecrest
- Greg Garrett, City of Tehachapi
- Mike Thomas, Thomas Refuse

Diversion Estimates

Once the working groups completed their portfolio designs, the Planning Team met to revise the tonnage estimates prepared in the Cost-Benefit Analysis for alternatives selected for "early" implementation. The revision process focused on developing more precise estimates by region, as opposed to the wide ranging countywide estimates prepared previously. Once completed, the revised estimates were used to determine whether or not the portfolios would recover a sufficient volume of material to achieve the objective of 75% diversion by 2020 established by the working groups.

Recovery tonnage for each alternative was evaluated on the basis of benchmarks for similar programs in other communities. The revised estimates also present a range of potential tonnage that reflects early program results as well as the possible results of programs as they mature and are improved over time. This allows the Planning Team to determine whether effort should be expended to improve or mature the "early" implementation programs or if new or additional programs from the "late" implementation category will be needed to achieve the target. Figure 11 presents the revised county wide total annual tonnage estimate for each of the "early" implementation items and Figures 12 through 15 present the estimates for each region.

Figure 11 – Countywide Additional Diversion Estimate

Policy, Program, or Facility Alternative	Start-Up	Mature	75% Goal
Single-Family Curbside Three Stream Collection:			
Single-Stream Recycling	42,996	64,920	
Organics Recycling	1,960	7,244	
Single-Family Pub. Ed & Outreach*	4,995	30,927	
Subtotal Single-Family Curbside Three Stream	49,952	103,091	
Multi-Family Recycling Collection	3,288	4,905	
Curbside Electronic Waste	51	127	
Commercial Recycling:			
Voluntary	5,709	8,929	
Mandatory/Universal	27,995	43,783	
Large Generator Technical Assistance*	3,745	22,591	
Large Event & Venue Recycling	21	58	
Subtotal Commercial Recycling	37,469	75,361	
Resource Recovery Park (Convenience)	13,231	42,325	
Reuse Store	960	1,680	
C&D Recycling/ Price Incentive	4,554	50,321	
Early Implementation Item TOTAL (Countywide)	**109,505**	**277,810**	**384,531**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

Figure 12 – West Region Additional Diversion Estimates

Policy, Program, or Facility Alternative	Start-Up	Mature
Curbside Electronic Waste	51	127
Commercial Recycling:		
Mandatory/Universal	1,048	1,638
Large Generator Technical Assistance *	116	702
Large Event & Venue Recycling	1	2
Subtotal Commercial Recycling	1,165	2,343
Resource Recovery Park (Convenience)	1,468	3,139
Reuse Store	60	120
C&D Recycling/ Price Incentive	1,504	2,995
Early Implementation Item TOTAL (West)	**4,248**	**8,724**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas of this region.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

Figure 13 – Central Region Additional Diversion Estimates

Policy, Program, or Facility Alternative	Start-Up	Mature
Single-Family Curbside Three Stream Collection:		
Single-Stream Recycling	32,561	48,169
Organics Recycling	0	0
Single-Family Pub. Ed & Outreach*	3,618	20,644
Subtotal Single-Family Curbside Three Stream	36,179	68,813
Multi-Family Recycling Collection	2,241	3,343
Commercial Recycling:		
Mandatory/Universal	23,114	36,149
Large Generator Technical Assistance *	2,568	15,493
Large Event & Venue Recycling	13	38
Subtotal Commercial Recycling	25,695	51,680
Resource Recovery Park (Convenience)	7,131	24,691
Reuse Store	360	600
C&D Recycling/ Price Incentive	0	27,121
Early Implementation Item TOTAL (Central)	**71,607**	**176,248**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas of this region.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

Figure 14 – North Central Region Additional Diversion Estimates

Policy, Program, or Facility Alternative	Start-Up	Mature
Single-Family Curbside Three Stream Collection:		
Single-Stream Recycling	4,094	7,810
Organics Recycling	1,960	7,244
Single-Family Pub. Ed & Outreach*	673	6,452
Subtotal Single-Family Curbside Three Stream	6,727	21,506
Multi-Family Recycling Collection	428	638
Commercial Recycling:		
Voluntary	5,709	8,929
Large Generator Technical Assistance *	634	3,827
Large Event & Venue Recycling	4	11
Subtotal Commercial Recycling	6,347	12,766
Resource Recovery Park (Convenience)	2,007	9,484
Reuse Store	420	720
C&D Recycling/ Price Incentive	0	9,634
Early Implementation Item TOTAL (North Central)	**15,929**	**54,748**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas of this region.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

Figure 15 – East Region Additional Diversion Estimates

Policy, Program, or Facility Alternative	Start-Up	Mature
Single-Family Curbside Three Stream Collection:		
Single-Stream Recycling	6,341	8,941
Single-Family Pub. Ed & Outreach*	705	3,832
Subtotal Single-Family Curbside Three Stream	7,045	12,772
Multi-Family Recycling Collection	619	924
Commercial Recycling:		
Mandatory/Universal	3,833	5,995
Large Generator Technical Assistance *	426	2,569
Large Event & Venue Recycling	3	7
Subtotal Commercial Recycling	4,262	8,572
Resource Recovery Park (Convenience)	2,626	5,001
Reuse Store	120	240
C&D Recycling/ Price Incentive	3,049	10,570
Early Implementation Item TOTAL (East)	**17,722**	**38,089**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas of this region.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

If programs are implemented early in the planning period (i.e., 2010 through 2013) they may be able to mature sufficiently to achieve as much as 277,810 tons of diversion from landfill disposal by 2020. However, if these "early" implementation programs are implemented, but not well managed and expanded (e.g. little or no education and outreach, monitoring, and modifications), they may result in as little as 109,505 tons. Once programs and facilities are in place, it is far more cost effective to improve the performance of those programs than to implement additional programs.

The "early" implementation items selected for the portfolios will likely result in approximately 107,000 tons less diversion than would be required to achieve the 75% diversion goal established by the working groups. If this goal is to be achieved by 2020, it will be necessary to begin planning and implementation of items selected for "later" implementation by 2015. Residential and commercial food waste programs, targeted wet/dry routing, and improved self-haul diversion facilities have been discussed by the working groups as likely next steps for achieving the additional diversion needed.

These planning estimates assume the participation of all incorporated and unincorporated areas within each planning region. To the extent that the Board decides to geographically limit implementation of programs in unincorporated areas or that City Councils fail to implement programs in incorporated areas, the resulting tonnage may be reduced.

Evaluation of Options

The working groups took the lead role in determining what policies, programs, and facilities would form their regional planning portfolios. In order to provide an objective and independent evaluation of the options, HF&H developed an evaluation matrix to assess the relative merits of each of the alternatives. The evaluation criteria and weighting that were used were developed by HF&H based on interviews with individual Board members and other major stakeholders during the scoping phase of this project. In general, the results of the independent evaluation tend to confirm the selections made by the working groups in each region. For example, the working groups generally selected single-family curbside recycling, mandatory commercial recycling, and resource recovery park in the early planning phase with these alternatives scoring in the top seven of the twenty alternatives evaluated. The evaluation matrix and a detailed description of the evaluation criteria used in the independent evaluation are included as Attachment 4.

SECTION 5: NEXT STEPS

At the conclusion of the first phase of the planning process, the Planning Team has identified three key next steps which will conclude the planning effort.

Board Input on Questions and Recommendations

The Planning Team presents the following four questions and associated recommendations for the consideration of the Board.

1. What should be the objective of the System Plan?

In compliance with the Board's guidance for no new landfills, the Planning Team recommends that the goal, for planning purposes, of the System Plan should be to achieve a 75% diversion rate by 2020 by implementing affordable, cost-effective programs and ensuring compliance with the current and foreseeable future regulatory requirements related to operating a waste management system.

2. What basic principles should guide the development of the System Plan?

In designing the portfolios and developing the specific implementation approach for each program, the Planning Team recommends that the following four basic principals be used to guide the process:

1) *Understand and anticipate the legislative and regulatory trends that will impact the implementation and execution of the System Plan.*

2) *Allow for flexibility over time by using a phased approach to the implementation of programs and facilities.*

3) *Minimize implementation cost and delays by leveraging existing infrastructure where possible and developing facilities which are relatively easy to permit.*

4) *Implement programs and facilities which promote the highest value and best use of recyclable materials as commodities.*

3. What collection strategies and facility infrastructure should form the foundation of the System Plan?

The Planning Team recommends that the System Plan be based on collecting source separated materials from customers and processing materials to promote the highest value of the resulting commodity streams (e.g. Clean Material Recovery Facilities and Compost Sites).

4. What major policy items should be included in the System Plan?

The Planning Team has considered a number of policies (e.g. Landfill Bans, Local Retailer Responsibility, Mandatory MRF First, and C&D Ordinance) and recommends that no formal policies or ordinances be adopted by the Board as part of the System Plan. Instead, the Planning Team recommends that the existing Board guidance of "No New Landfills" from the Infrastructure Plan be maintained to guide KCWMD.

If the Board concurs with the recommendations of the Planning Team, this process will move into the second phase which is intended to include more detailed analysis of the cost of the selected programs, the funding mechanisms, and the economic strategies that will be used to implement them. However, if the Board provides additional policy direction, the Planning Team will revise the recommendations of this phase of the planning process, as appropriate, to respond to the direction of the Board.

City Council Updates

Many of the Cities have been involved in the development of the System Plan through the involvement of staff or members of their city councils in the Planning Team. However, it is generally the case that this involvement has been limited to one or two individuals per jurisdiction. If the System Plan is going to be successful, it will require a significant multi-jurisdictional coordination. That is necessarily the case because the City Councils have the ability to control and direct the implementation of programs in their jurisdiction. As such, KCWMD staff will coordinate with senior staff at the cities to arrange for a presentation to the city council to update them on the status of the planning effort and will solicit their continued involvement in the implementation planning stage.

Implementation Planning

The second phase of the development of the System Plan involves a series of detailed implementation planning issues including:

- How much will each program cost?
- How will programs and facilities be funded?
- Who will own and who will operate facilities and programs?
- Who will perform public education and outreach activities?
- What modifications need to be made to existing franchise agreements?
- What multi-jurisdictional coordination will be needed?
- How should implementation be sequenced to maximize cost-effectiveness?
- How will programs be monitored, reviewed, and modified once implemented to maximize cost-effectiveness?

Once the Planning Team has addressed these questions, each jurisdiction will have an opportunity to determine their level of involvement. The Planning Team has found that the active involvement of all of the stakeholders was instrumental to the success of this first phase of the planning effort. Therefore, it is critical that the County, the cities, and the haulers all remain engaged in this process as a team. This team approach will ensure that the resulting System Plan is truly the best approach for the County and reflects the varied insights and perspectives that will make the System Plan successful.

County of Kern
Program and Facility Alternatives

Landfill Bans

Program/Facility Description

This policy would ban the disposal of specified materials in County landfills.

General Comments

- Landfill bans are used at the local, state, and national levels to prohibit specific materials from landfilling (e.g. universal waste, whole tires, etc.).
- Santa Cruz, Sonoma, San Luis Obispo, and San Diego counties have all used landfill bans to improve diversion program performance. Most local examples of landfill bans involve agencies that own the disposal facilities.
- In the more effective landfill ban examples, significant economic incentives are coupled with the bans. For example, Sonoma County bans disposal of source separated yard waste and offers a processing fee for such waste that is approximately 1/3 of the rate for solid waste disposal.

Implementation Considerations

- The target materials to be included need to be determined. Particular consideration should be given to the availability of the recovery infrastructure and markets when banning materials.
- Determine the generation thresholds or generator types to be included or exempted from the ban.
- A recent legal opinion supports the enforcement of landfill bans at the generator level. This tactic may help to reduce the problems that are inherent in this type of policy (e.g., identifying household batteries in a transfer trailer load). This also allows for the County to have an effect on waste generation in the incorporated Cities without the direct action of their elected officials.
- Significant publicity will be needed to make this policy effective. Customers will need to know that the ban exists and what they need to do instead of disposing the material.
- A stakeholder input process is useful to educate generators, haulers, and transfer station or landfill operators about the ban and troubleshoot any concerns that they may have.

Key Considerations for Kern County

- Consider targeting items like yard waste or cardboard as the first materials for the ban. There are sufficient convenient opportunities for diverting these materials, resulting in limited obstacles to compliance with the policy.

County of Kern
Program and Facility Alternatives

Landfill Bans

- Consider making the ban universally applicable to all generator types and threshold levels, but performing active enforcement on a limited population (e.g. generators of over four cubic yards per week of trash).
- Consider a phased enforcement schedule. For example, violations in the first year will be used as an educational opportunity, violations in the second year will result in a warning and then a small fine for subsequent violations, violations in the third year and beyond will result in significant and escalating fines.
- Consider a tiered structure for fines so that the first offense results in a warning notice or a minor fine while repeated and willful violations can result in fines significant enough ($1,000 or more) to provoke action.
- Determine what resources can be made available for enforcement. Some jurisdictions have identified county health as a good enforcement agency, because they visit businesses for inspections on a regular basis anyway and this item could be added to their inspection list. Enforcement personnel need to have authority to issue citations.

Environmental Considerations

- Potential to divert between 22,208 and 336,632 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collection system to meet the additional demands for separating the materials placed on the generator resulting in increased emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.
- Greenhouse gas emissions reductions are associated with composting of organics due to reduced CH_4 generation relative to landfilling.

Estimated Costs

- Low $0.51 per diverted ton.
- High $3.27 per diverted ton.

Model Programs

- Alameda County, Santa Cruz County, San Luis Obispo County

County of Kern
Program and Facility Alternatives

Local Producer Responsibility

Program/Facility Description

The Board of Supervisors would establish an ordinance requiring that all retailers of specific product types be required to take those products back at the end of their useful lives and arrange for and ensure their proper recycling.

General Comments

- Examples of similar legislation exist at the state level for electronic and universal wastes.
- Voluntary programs have been set-up by numerous businesses (e.g. Best Buy, IKEA, Home Depot, Dell, etc.) throughout the state and country. These retailers typically rely on their existing "back-haul" infrastructure to remove items from the store that may not be available to smaller companies.
- Community-sponsored programs have been setup throughout the state where local government works with retailers to locate take-back programs in their stores, but the local government incurs the cost of material management.
- Typically focuses on a specific set of "problem" materials (e.g. universal waste, tires, bulky items, sharps, and pharmaceuticals).

Implementation Considerations

- Determine the materials to be managed.
- Determine whether an Advanced Disposal Fee (ADF) will be charged for specific items.
- Determine if exemptions are to be made for retailers below a specific threshold (e.g. less than $5 million in annual sales or less than 100 units of "problem materials" sold annually).
- Community and retailer education is the key to collecting significant volumes of materials.

Key Considerations for Kern County

- If an ADF system is utilized tracking, reporting, authentication, and repayment mechanisms are needed to ensure that the system is not inundated with non-contributing materials. Special counterfeit resistant stickers may be effective in authenticating certain items (e.g. cell phones, televisions, electronic goods).
- Stakeholder outreach will be critical and the concept may not be warmly welcomed.
- May be useful to start with materials that have low costs to manage (e.g. household batteries) or may produce revenue (e.g. e-waste) to get businesses accustomed to the program in a low-risk way.

County of Kern
Program and Facility Alternatives

Local Producer Responsibility

Environmental Considerations

- Potential to divert between 2,533 and 18,312 tons per year.
- Potentially significant increases in improved hazardous waste exclusion.
- Promotes the highest and best use of materials.
- No material change in vehicle-related emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials, particularly true with universal waste items.

Estimated Costs

- Low $4.49 per diverted ton.
- High $12.02 per diverted ton.

Model Programs

- None

County of Kern
Program and Facility Alternatives

Conversion Technologies

Program/Facility Description:

Conversion technologies include a variety of facilities that convert solid waste into liquid fuel, natural gas, or other forms of energy. Conversion technologies are distinct from incinerator technologies as they use advanced processes and technologies and, generally, result in reduced environmental impact and greater yield of saleable product. Available technologies include:

- Anaerobic Digestion: This technology is identical to the technology currently used to digest biosolids into energy and the byproduct is a compost-ready product.
- Gasification and Pyrolysis: This technology uses a high heat process (800˚F to 8,000˚F) to convert organic materials into fuel or energy and inorganic materials into useable products (e.g. aggregate and metals).
- Hydrolysis: This technology uses a chemical reaction to convert the organic fraction of the waste stream into sugars which can then be converted into a highly concentrated fuel-grade ethanol. Hydrolysis requires that inorganic materials such as plastics, metals, and glass be removed prior to processing.

General Comments

Anaerobic Digestion:

- There are no commercial examples of MSW digestion technology in the U.S., however, facilities exist for mixed organics processing.
- More than 10 commercial applications are operating internationally for MSW processing.
- Proven at capacities of up to 900 tons per day.
- Potential for 65% to 85% diversion (by weight) from landfilling.
- Requires composting of digester residuals resulting in marketable compost.

Gasification and Pyrolysis:

- There are no commercial examples in the U.S.
- More than 20 commercial applications are operating internationally.
- Proven at capacities of up to 600 tons per day.
- Potential for 85% to 100% diversion (by weight) from landfilling.
- Potential for marketing of non-energy byproducts.

Hydrolysis:

- There are no commercial examples in the U.S. or internationally.
- Potential for up to 90% diversion (by weight) from landfilling.

County of Kern
Program and Facility Alternatives

Conversion Technologies

- Requires presorting of materials prior to processing, resulting in added cost, but highest and best use of recoverable materials (e.g. metals, plastics, glass, and cardboard).
- Potential for marketing non-energy byproducts.

Implementation Considerations

- The County or vendor would need to identify a site with compatible land uses and implement a public education and outreach effort.
- Permitting of these technologies with state and local agencies without U.S. or California examples would be difficult, time consuming, and expensive.
- Numerous agreements would have to be negotiated (e.g. flow control, operating contract, energy contract, etc.)

Key Considerations for Kern County

- Lack of applications in the U.S. and California make these technologies high risk (technology, reliability, environmental concerns, permitting). Therefore, if the County wishes to proceed, it would be important to identify a vendor who is willing to take the majority of the risks.
- As with all alternative energy products and technologies, these technologies become more economically viable as the cost of oil increases.
- Air impacts created by these facilities would be regulated by the local air district and such regulation may be significant enough to prevent siting.

Environmental Considerations

- Potential to divert between 44,503 and 616,442 tons per year.
- Conversion technology facilities claim that they produce no emissions which cannot be controlled.
- Ozone- and smog-forming emissions vary between processing technologies.
- Greenhouse gas emissions are significantly reduced by these technologies due to high levels of effectiveness in capturing CO_2 and CH_4.
- Use of fuels resulting from these technologies, particularly in motor vehicles, results in reduced CO_2 emissions.
- Land use compatibility is a key concern in siting facilities.

Estimated Costs

- Anaerobic Digestion: $47.06 - $92.31 per ton

County of Kern
Program and Facility Alternatives

Conversion Technologies

- Thermal Processing: $55.00 - $154.65 per ton
- Gasification and Pyrolysis: $60.00 - $117.65 per ton
- Hydrolysis: $72.22 - $83.33 per ton

Model Programs

- CCCSWA (Contra Costa County) partnership with East Bay Municipal Utility District (EBMUD) for anaerobic digestion
- Comprehensive studies are in progress in San Diego, CA and Los Angeles, CA

County of Kern
Program and Facility Alternatives

MSW Composting

Program/Facility Description

A composting facility is designed to receive municipal solid waste, as collected from customers, and convert it through an accelerated and controlled aerobic and anaerobic biological process into useful compost material.

General Comments

- Commercially viable examples of facilities in California include those in Gilroy and Mariposa.
- Effective in creating high diversion levels because a significant fraction of the typical residential waste stream (approximately 65% in the 2004 Statewide waste characterization study) is made of materials which biodegrade quickly (i.e., food, paper, cardboard, biosolids, yard waste).
- Does not promote the highest and best use of recovered materials, but may offer significant diversion improvement in hard to reach generators like restaurants and multi-family.
- Little or no impact on haulers or customers.

Implementation Considerations

- The County or facility operator would need to identify a site with compatible land use and conduct public education and outreach to secure land use permits.
- Permitting of the facility obtained from the CIWMB, air district, water board is feasible if appropriate technologies (e.g. in-vessel, gas capture, concrete pad, drainage capture, etc.) are implemented to mitigate regulatory concerns.
- Feedstock guaranty would be required prior to significant efforts in permitting or construction.
- Presorting of material to eliminate contaminants (e.g. hazardous waste, heavy metals, plastics, etc.) is necessary and then some of the resultant materials can be marketed as commodities.
- No public education or outreach necessary for program to be effective on an ongoing basis.

Key Considerations for Kern County

- Co-locating facilities with existing landfill sites, particularly on closed or inactive cells, would significantly reduce land use permitting, water board, the CIWMB, and feedstock concerns.
- If existing compost facilities are required to make significant operational changes in response to air district regulations, those changes may present an opportunity to revise

County of Kern
Program and Facility Alternatives

MSW Composting

operations and permits to accommodate some volume of MSW composting at the existing facility.

- Targeting materials obtained from specific hard to reach sectors (e.g. restaurants and multi-family), as opposed to applying this strategy to all waste streams, will prove more economically viable.
- Work with franchisees to identify appropriate material streams, customer types, and geographic areas for implementing this tactic.

Environmental Considerations

- Potential to divert between 21,257 and 122,034 tons per year.
- Does not promote the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions.
- Ozone- and smog-forming emissions from composting are low and would be controlled by in-vessel systems.
- Greenhouse gas emissions are significantly reduced due to high levels of effectiveness in capturing CO_2 and CH_4.
- Land use compatibility is a key concern in siting facilities.

Estimated Costs

- Low $65.29 per diverted ton.
- High $139.10 per diverted ton.

Model Programs

- Portola Valley, CA; Woodside, CA; San Jose, CA (Multi-Family); Mariposa, CA

County of Kern
Program and Facility Alternatives

MRF First

Program/Facility Description

This policy would require that all material entering a County landfill must first be processed at a Materials Recovery Facility (MRF) to maximize recovery of usable materials and improve exclusion of hazardous waste.

General Comments

- Landfill sites would be closed to specific user types (e.g. residential and commercial packer trucks, roll-off vehicles, etc.) or open to only specific user types (e.g. only residential self-haul less than 12 cubic yards and transfer trailers containing certified loads from MRFs).
- Potentially high-cost strategy due to extra handling and labor requirements.
- Moderate to high effectiveness in achieving commodity and hazardous waste diversion depending on achievement performance standards.

Implementation Considerations

- Requires siting and permitting of at least two additional "dirty MRF" facilities in the County to manage the throughput requirements and up to eight additional facilities to maximize customer convenience.
- Operational decisions and facility locations could be focused on customer convenience to improve customer service
- Public education and outreach will be required to notify affected haulers and the public of restricted access to existing sites.

Key Considerations for Kern County

To ensure that this program is successful, the ordinance should specifically define:

- Affected parties and quantity thresholds (e.g. only residential self-haul less than 12 cubic yards and transfer trailers containing certified loads from MRFs allowed to dump at active landfill face);
- All County-owned landfills are required to comply with the ordinance;
- Flow control from all Cities and unincorporated County areas to require that material does not leak out of the system to avoid the MRF requirements and associated costs;
- Material recovery goals (e.g. 90% of recoverable fibers and CRV materials, 70% of non-CRV plastics and metals, 80% of compostable organics, overall residual of less than 30%, etc.);
- Banned materials exclusion requirements (e.g. exclude all e-waste, u-waste, automotive fluids, tires, etc.);

County of Kern
Program and Facility Alternatives

MRF First

- Enforcement responsibility (e.g. LEA to provide initial certification and conduct monthly residual audits to ensure compliance);
- Penalties for failure to comply with recovery or exclusion requirements (e.g. notice of violation for first occurrence, $500 for second occurrence, $1,000 for each additional occurrence); and,
- Phase in and grace periods (e.g. 18 month implementation to allow for facility development and certification, 50% of fines during first 12 months, 75% of fines during subsequent 12 months).

Environmental Considerations

- Potential for:
  - Diversion between 124,801 and 247,085 tons per year.
  - High landfill exclusion of hazardous materials.
  - Significant reductions in CH_4 emissions from landfills due to recovery of organic waste.
  - Reductions in vehicle trips and resulting ozone- and smog-forming emissions resulting from more convenient locations of MRF facilities.

Estimated Costs

- Low $132.72 per diverted ton.
- High $230.39 per diverted ton.

Model Programs

- Beverly Hills, CA; Cerritos, CA; Dana Point, CA; Pleasanton, CA

County of Kern
Program and Facility Alternatives

No New Landfills

Program/Facility Description

This amendment to the general plan would prohibit landfilling as a land use within the County except for the specific existing facilities which would be grandfathered in.

General Comments

- Premium value would be placed on the remaining capacity in County landfills. This improves the economics of resource recovery and conservation activities.
- Such a general plan amendment would eliminate concerns regarding a private company establishing a large regional landfill in the County to accept waste from Southern California and the resulting traffic and air quality impacts from such a landfill.
- A ban on new landfills would result in the need for implementing a zero waste or high diversion plan.

Implementation Considerations

- An amendment to the general plan must be made to ban zoning for landfills. Such a general plan amendment would require CEQA review.
- We suggest the County not impose a blanket prohibition on solid waste facility permits because material recovery facilities (MRF), transfer stations, and composting facilities are going to be needed.
- Requires siting and permitting of additional diversion facilities in the County to manage the processing requirements.

Key Considerations for Kern County

- Allows the County the flexibility for a phase-in and grace period to draft and implement a zero waste or high diversion plan while still having long-term disposal capacity at current landfills.
- Material recovery goals need to increase significantly if the amount of disposal capacity available decreases.
- Current transfer stations, MRFs, and compost facilities in the County may need to apply for permit expansions to allow them to process a higher volume of materials.

Environmental Considerations

- Direct diversion is negligible due to customers handling recyclables and solid waste as usual. However, the additional value/diversion is derived from the scarcity of landfill capacity that results from this program. This creates an incentive to develop and use alternative management strategies.

County of Kern
Program and Facility Alternatives

No New Landfills

- Reduced risk-exposure of from potential groundwater contamination and other environmental hazards associated with landfills.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.
- Greenhouse gas emissions reductions are associated with composting of organics due to reduced CH_4 generation relative to landfilling.

Estimated Costs

- No ongoing operational cost incurred. The County will incur one-time costs for updating general plan and performing environmental impact analysis and reporting.

Model Programs

Fresno County

County of Kern
Program and Facility Alternatives

Multi-Family Technical Assistance

Program/Facility Description

Multi-family property managers and tenants are provided with targeted assistance to improve the participation levels and effectiveness of recycling in that sector. Each property is visited several times in the implementation phase to get the program started and then visited again once each year in the maintenance phase to help with program tune-up and training of new property management or tenants.

General Comments

- The multi-family sector is generally regarded as hard to reach and underperforming due to lack of education, high turn-over rates, high multi-lingual populations, and general lack of interest or concern for recycling.
- Education and training for these customers has been demonstrated to generate increased participation levels and reductions in contamination of recyclables.
- Grant funding for programs targeting the multi-family sector is available from the CIWMB and DOC.
- Investment in this program is a commitment of time rather than capital equipment.

Implementation Considerations

- Franchise agreements will need to be amended with the current franchisees to provide recycling collection service from these customers in appropriate container types and sizes and frequencies of collection.
- The County will need to identify the individuals or groups who will be responsible for performing the outreach. Some communities rely on their franchisee to perform this service while others use jurisdiction staff, interns, or consultants.

Key Considerations for Kern County

- Develop graphics-intensive education and outreach materials to overcome the language barrier and use mutli-lingual text when graphics are not sufficient to convey the message.
- Consider providing "personal recycling bins" or "recycling buddies" to each multi-family unit participating in the program. These indoor collection containers are proven to considerably increase participation and are significantly lower in cost than the carts typically provided to each single-family unit.
- Consider providing an incentive or rewards program to either or both the property managers and tenants for being high performers. Such incentives may include service discounts, coupons for local businesses, or "cash for recycling" programs.

County of Kern
Program and Facility Alternatives

Multi-Family Technical Assistance

- Ensure that the individuals performing this service are properly motivated and have performance standards tied to their compensation for the outreach activities. A minimum threshold should be developed in order to set that standard.
- Develop a strategy for rolling out this program in a phased approach and set realistic targets for the number of units or complexes that will be targeted at one time to ensure that they get the level of attention that they need.
- Annual maintenance visits should include inspecting container locations and suggesting revisions to service levels, restocking education materials distributed to each new tenant, and, if possible, restocking supplies of personal recycling bins to be distributed to new tenants.
- Ensure that staffing levels are sufficient in both the implementation and annual maintenance phases to serve all the customers. If maintenance is not performed, performance will drop.

Environmental Considerations

- Potential to divert between 3,766 and 6,120 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $20.66 per diverted ton.
- High $25.42 per diverted ton.

Model Programs

- Emeryville, CA; Los Angeles, CA; San Diego, CA; Newark, CA

County of Kern
Program and Facility Alternatives

Curbside Three Stream Collection

Program/Facility Description

Customers are provided with containers to collect three streams of materials: single-stream recyclables (i.e., mixed paper, cardboard, plastic, glass, metal, etc.), mixed compostable organics (i.e., food scraps and green waste), and solid waste (i.e., non-recyclable, non-compostable, and non-hazardous). Collected materials are taken by the franchised hauler to the appropriate facility (i.e. MRF, compost facility, or landfill) for further processing or disposal.

General Comments

- Widely adopted by communities throughout California and the U.S.
- Proven to generate landfill diversion levels of up to 65% from the single-family residential sector.
- Start-up costs for this program (e.g. new collection trucks, new containers, etc.) may be substantial, particularly if new facilities are required to process recyclables or compost organics.

Implementation Considerations

- Franchise agreements will need to be amended with the current franchisees.
- Contractual arrangements with recyclables processing and composting facilities will need to be made.

Key Considerations for Kern County

- Universal provision of service at no additional cost, as opposed to the current voluntary system, is likely to generate the best results.
- Co-locating processing and composting facilities with existing transfer station and landfill sites, particularly on closed or inactive cells, would significantly reduce land use permitting, water board, the CIWMB, and vehicle trip efficiency concerns.
- Phased implementation starting with single-family residential customers and progressing into hard to reach sectors (i.e. multi-family and commercial) is likely to provide the greatest long-term program success.
- The success of these programs is directly tied to the effectiveness and pervasiveness of the public education and outreach strategy tied to them. During the first two to four years of the program significant investment should be made in these efforts.
- Contamination of recyclables and organics can significantly degrade the market value of the items as commodities. Significant education, outreach, and enforcement efforts are typically necessary in the first years of these programs to minimize contamination.

County of Kern
Program and Facility Alternatives

Curbside Three Stream Collection

Environmental Considerations

- Potential to divert between 66,039 and 247,218 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase as the result of adding containers to the collection system resulting in increased emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.
- Greenhouse gas emissions reductions are associated with composting of organics caused by reduced CH_4 generation relative to landfilling.

Estimated Costs

- Low $42.66 per diverted ton.
- High $205.63 per diverted ton.

Model Programs

- Fresno, CA; Mission Viejo, CA; Orange, CA; El Centro, CA; Livermore, CA; Newark, CA

County of Kern
Program and Facility Alternatives

Curbside E-Waste & U-Waste

Program/Facility Description

Customers are provided with regular or on-call collection of specified electronic or universal waste items including, for example: batteries, cell phones, computers, monitors, televisions, fluorescent bulbs and tubes, and thermostats.

General Comments

- Legislation exists which prohibits both residential and commercial electronic and universal wastes from landfill disposal.
- This program offers the greatest possible convenience for customers in managing these difficult material streams. This convenience results in a higher likelihood that hazardous and banned materials will not be disposed of in the County's landfills.
- These convenient collection programs are becoming increasingly common as new and revised collection contracts are implemented throughout California.

Implementation Considerations

- Existing franchise programs would need to be modified, likely through amendments to the agreements, to include proper management of these items.
- Smaller items (e.g. batteries, cell phones, etc.) can be easily collected during regular trash or recycling collection in a separate container inside or affixed to the collection vehicle or inside the recycling cart provided that the processing facility is actively sorting for this material. However, there may be some concern with breakage of items in packer trucks.
- Larger and/or more fragile items (e.g. televisions, monitors, computers, fluorescent tubes, etc.) require special handling which is typically provided through on-call service.
- Special permits may be needed for haulers who will transport significant volumes (i.e. over 15 gallons or 125 pounds) of hazardous materials at any given time.

Key Considerations for Kern County

- Require each collector to be registered as an e-waste collector and use the revenues derived from these items to offset some program costs.
- Program definitions should include:
  - A list of acceptable materials to be collected curbside versus those collected on-call;
  - The number of items allowed per collection event for both on-call and regular service;
  - The number of on-call collections to be provided at no additional cost;
  - A cost per collection for additional items and collections;

County of Kern
Program and Facility Alternatives

Curbside E-Waste & U-Waste

- Customer education and program promotion requirements;
- Designation of acceptable final disposition or markets for collected materials;
- Reporting requirements; and,
- Performance incentives and penalties.

- Ensure that acceptable disposal/processing facilities exist for collected materials. If they do not, work to develop and promote them.

Environmental Considerations

- Potential to divert between 959 and 2,397 tons per year.
- High potential to exclude significant volumes of hazardous materials from County landfills.
- Vehicle trip and resulting ozone- and smog-forming emissions reductions resulting from more efficient routing and collection of materials.
- Reasonable potential for reductions in illegal dumping of hazardous materials.

Estimated Costs

- Low $495.07 per diverted ton.
- High $5,500.77 per diverted ton.

Model Programs

- Inglewood, CA; Orange, CA; Dana Point, CA; Livermore, CA

County of Kern
Program and Facility Alternatives

Large Generator Technical Assistance

Program/Facility Description

High volume commercial and industrial waste generators are provided with targeted assistance to improve the volume and type of materials that they can recycle. Each targeted customer is visited two or three times in the implementation phase to develop and implement a plan and train employees. Each customer is visited again once each year in the annual maintenance phase to help with program tune-up and train new employees.

General Comments

- The commercial sector is a priority target for the CIWMB and most recycling advocates because they represent the "low hanging fruit" due to their high volume of generation and relatively low diversion performance.
- Increasing levels of waste reduction and recycling and decreasing levels of garbage service for large generators has the potential to save hundreds or thousands of dollars each month for customers, so they are generally receptive to assistance, particularly if it is provided at no cost to them.
- Grant funding for programs targeting the commercial sector is available from the CIWMB and DOC.
- Investment in this program is a commitment of time rather than capital.

Implementation Considerations

- Franchise agreements will need to be amended with the current franchisees to provide recycling collection service from these customers in appropriate container types and sizes and frequencies of collection.
- Reports will be required from franchised haulers to identify the contact names, addresses, and service levels of high volume generators in order to develop a list of customers to target.
- The County will have to identify the individuals or groups who will be responsible for performing the outreach. Some communities rely on their franchisee to perform this service while others use jurisdiction staff, interns, or consultants. If advanced outreach strategies (e.g. manufacturing process improvements) are part of this program, the outreach staff will need to be trained specifically to identify such opportunities and implement appropriate strategies.

Key Considerations for Kern County

- Utilize a pilot approach when starting the program to develop and refine the overall strategy and specific tactics that will be used in the targeted geographic area and with specific generator types. The most effective sales strategy will be to focus on cost savings.

County of Kern
Program and Facility Alternatives

Large Generator Technical Assistance

- Ensure that the individuals performing this service for the County are properly trained and motivated and have performance standards tied to their compensation for the outreach activities. A minimum threshold should be developed in order to set that standard.
- Develop a strategy for rolling out this program in a phased approach and set realistic targets for the number of generators that will be targeted to ensure that they get the level of attention that they need.
- Annual maintenance visits should include inspecting container locations and suggesting revisions to service levels, restocking education materials distributed to each new tenant, and, if possible, restocking supplies of personal recycling bins to be distributed to new tenants.
- Ensure that staffing levels are sufficient in both the implementation and annual maintenance phases to serve all the customers. If maintenance is not performed, performance will drop.

Environmental Considerations

- Potential to divert between 39,096 and 117,287 tons per year..
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $3.98 per diverted ton.
- High $4.21 per diverted ton.

Model Programs

- Los Angeles, CA; Irvine, CA; Livermore, CA; StopWastePartnership (Alameda County); Los Banos, CA

County of Kern
Program and Facility Alternatives

Commercial Wet/Dry Routing

Program/Facility Description

Routing for commercial collection is based on classifying the material stream of customers as primarily dry (e.g. paper) or primarily wet (e.g. food waste) and collecting each bin with either the "dry" or "wet" trucks. The dry stream is typically composed of easily sorted materials (e.g. paper, cardboard, plastic film, metals, general debris, etc.) that are relatively free of contaminants like food or liquids. This stream is sorted for recyclables. The wet stream is typically composed of putrescible materials that can be screened to remove contaminants and then composted. Wet/dry systems can operate with or without the active involvement of the customer.

General Comments

- Commonly used in the commercial sector by recycling companies (e.g. Green Waste Recovery in San Jose), frequently without customer knowledge.
- Two small California jurisdictions have achieved over 75% diversion through this program.
- The City of San Jose uses this in the multi-family sector with over 75% diversion.
- Wet/dry routing may help to achieve diversion in sectors where active participation may be difficult to get.
- Commercial recycling is currently targeted by both the CIWMB and the Air Resources Board (through the AB32 scoping plan) as the next major recycling effort due to the significant opportunity for progress and linkage to climate change.

Implementation Considerations

- Contractual arrangements with recyclables processing (possibly a dusty/dirty MRF) and composting facilities (possibly MSW composting) will need to be made.
- The County will have to decide whether to use an exclusive franchise system, permit system, open market system, or some combination of these (e.g. franchised "hauler of last resort" in an open market). Some jurisdictions (e.g. South Bayside Waste Management Authority, Central Contra Costa Solid Waste Authority) have excluded the "dry" materials from the scope of their franchises to generate competition.

Key Considerations for Kern County

- Developing routing concentrations for targeted accounts is the key to cost-effectiveness in this program. The County should focus initially on targeting high-density office building or restaurant district accounts.
- The County needs to arrange for sufficient and consistent processing capacity for the materials being collected, possibly including a facility permitted for MSW composting.

County of Kern
Program and Facility Alternatives

Commercial Wet/Dry Routing

Environmental Considerations

- Potential to divert between 21,707 and 93,126 tons per year.
- May not promote highest and best use of materials, because the system institutionalizes some contamination.
- May not develop recycling ethic with customers who are not active participants.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for harvesting and processing of virgin materials.
- Greenhouse gas emissions reductions are associated with composting of organics due to reduced CH_4 generation relative to landfilling. This program may help with the County's compliance with AB32.

Estimated Costs

- Low $(27.45) per diverted ton.
- High $66.95 per diverted ton.

Model Programs

- Portola Valley, CA; Woodside, CA; San Jose, CA; Cerritos, CA; Dana Point, CA; Hayward, CA

County of Kern
Program and Facility Alternatives

Commercial & Multi-Family Bulky Item Collection

Program/Facility Description

This program extends the County's current residential bulky item program to commercial and multi-family customers. Bulky item management issues are far more prevalent in the multi-family sector where turnover rates are high and property managers are frequently left having to deal with furniture or excessive trash from departed tenants. Commercial customers also have a need for this program to deal with e-waste items and discarded furniture.

General Comments

- Widely adopted by communities throughout California and the U.S. in the single-family sector; multi-family and commercial bulky item collection programs are not as common.
- Increased opportunities for removal of bulky and e-waste items for businesses and multi-family customers may reduce illegal dumping of these items.
- Start-up costs for this program should be minimal due to the existence of a comparable program in the single-family sector.

Implementation Considerations

- Franchise agreements will need to be amended with the current franchisees. Alternatively, a local non-profit (e.g. BARC) that has the ability to collect, refurbish, and resell items could be utilized.
- Arrangements with a thrift or reuse store should be made to accept serviceable or repairable items so that they can be returned to use rather than disposed of.
- The number of "no additional charge" bulky item collections provided per year for each multi-family residential unit will need to be determined as well as a rate per collection for each additional service.
- The County will have to determine the rate for each bulky item collection service provided to commercial customers.
- Program details and educational materials for each sector should define:
    - The quantity of materials allowed per set-out (e.g. no more than two cubic yards of bagged trash, no furniture items exceeding 150 lbs., no more than two furniture items, etc.);
    - Examples of materials which are allowed in the program (e.g. furniture, appliances, automotive parts, computers, monitors, etc.) as well as specific listings of those which are excluded (e.g. automotive fluids, mercury thermometers, paint, etc.); and,
    - Listings of items which will incur additional charges and the specific charges for those materials (e.g. $5 per additional furniture item, $7 per electronic device, etc.)

County of Kern
Program and Facility Alternatives

Commercial & Multi-Family Bulky Item Collection

Key Considerations for Kern County

- The service provider should be required to develop, implement, and effectively operate a plan for recycling and reusing the collected items to the greatest extent feasible. These efforts may include developing partnerships with non-profits, existing thrift store infrastructure, local repair shops (e.g. lawnmowers, vacuum cleaners, furniture, etc.), local construction and home improvement retailers and wholesalers, or developing their own "re-use store" where items can be sold back to the public to offset some of the program costs.
- Require the hauler to become a certified e-waste collector and use the revenue received for collecting e-waste items to offset some of the program costs.

Environmental Considerations

- Potential to divert between 1,176 and 2,352 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency and the resulting emissions reductions should result from providing an efficient routing system for collecting these materials.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for harvesting and processing of virgin materials.

Estimated Costs

- Low $10.19 per diverted ton.
- High $46.33 per diverted ton.

Model Programs

- Livermore, CA; Los Banos, CA; Orange, CA; Rancho Palos Verdes, CA; Cerritos, CA

County of Kern
Program and Facility Alternatives

Commercial Recycling: Mandatory/Universal Provision of Service

Program/Facility Description

This program requires that all commercial and multi-family customers subscribe to, receive, and use recycling collection services. There are two approaches:

- The universal provision of service approach requires franchised service providers to provide recycling services to every business in their service area.
- The mandatory recycling ordinance approach requires the business to subscribe to service and participate in the program.

General Comments

- Commercial recycling is currently targeted by both the CIWMB and the Air Resources Board (through the AB32 scoping plan) as the next major recycling effort due to the significant opportunity for progress and linkage to climate change.
- Universal provision of service has been used in the residential sector for decades with great success. Some communities are also beginning to adopt the program in the commercial sector.
- Mandatory recycling ordinances are new in California (e.g. Fresno, San Diego, Santa Cruz, and Palo Alto) but may become increasingly popular, particularly with jurisdictions who are reaching for higher diversion levels.
- Mandatory recycling ordinances are a legislative/regulatory approach whereas the universal provision of service provides an infrastructure or customer service approach.
- Start-up costs for this program (e.g. new collection trucks, new containers, etc.) may be substantial, particularly if new facilities are required to process recyclables.

Implementation Considerations

Universal Provision of Service

- Franchise agreements will need to be amended with the current franchisees and processing infrastructure developed.
- Determining the initial level of service for each business will require significant outreach. A default could be used (e.g. 95-gallon cart service) and then businesses could be required to call to change service levels.
- The County would need to restructure rates to ensure that customers are properly incentivized to use the program. Particular consideration should be given to whether or not customers will be allowed to refuse the service and the impact that pricing may play on their decision.

County of Kern
Program and Facility Alternatives

Commercial Recycling: Mandatory/Universal Provision of Service

Mandatory Recycling Ordinance

- There are two models for this approach. The first is to require businesses to subscribe to recycling service and actively participate in it. The other goes further to say that customers are prohibited from placing recyclables in the solid waste container. Reporting and enforcement will be simplified in the first, while the second should provide higher levels of diversion.
- Determine the generation thresholds or generator types to be included or exempted from the recycling requirement, if any.
- Determine the target materials to be included. Particular consideration should be given to accessibility of the recovery infrastructure and markets when mandating recycling of specific materials.
- Consider coupling the mandatory recycling ordinance with a landfill ban.
- Develop an enforcement plan that includes strategies for staffing, goals, and phasing.

Key Considerations for Kern County

- Design rate structures for commercial recycling that provide substantial economic incentive for reducing garbage service levels and increasing recycling service levels. Progressive rate structuring with discounted or free recycling service tends to produce the best results during the sales process.
- The success of these programs is directly tied to the effectiveness and pervasiveness of the public education and outreach strategy tied to them. If universal provision of service is chosen, require the contractor to handle promotion and outreach. If mandatory recycling is chosen, the County should develop outreach materials to educate customers and use enforcement staff in the first years to provide the targeted assistance.
- Consider a phased enforcement schedule. For example, violations in the first year will be used as an educational opportunity, violations in the second year will result in a warning and then a small fine for subsequent violations, violations in the third year and beyond will result in significant and escalating fines.
- Consider a tiered structure for fines so that the first offense results in a warning notice or a minor fine while repeated and willful violations can result in fines significant enough ($1,000 or more) to provoke action.
- Determine what resources can be made available for enforcement. Some jurisdictions have identified county health as a good enforcement agency because they visit businesses for inspections on a regular basis anyway and this item could be added to their inspection list. Enforcement personnel need to have authority to issue citations.

County of Kern
Program and Facility Alternatives

Commercial Recycling: Mandatory/Universal Provision of Service

Environmental Considerations

- Potential to divert between 39,096 and 144,557 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions. These may be partially off-set if processing facilities are located closer to collection locations than disposal or transfer facilities.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $(38.15) per diverted ton.
- High $170.78 per diverted ton.

Model Programs

- Mandatory Recycling – Sacramento, CA; San Diego, CA; Seattle, WA
- Universal Provision of Service – Alameda, CA; Stockton, CA

County of Kern
Program and Facility Alternatives

Commercial Food Waste

Program/Facility Description

Customers are provided with containers to separate and collect food waste from the commercial sector. This program is typically targeted at restaurants, institutions (e.g. hospital, prison, school cafeterias, etc.), and food processing businesses. The franchised hauler collects these materials and delivers them to a composting facility or anaerobic digester to be processed for market. Food waste can be collected either pre- or post-consumer. Pre-consumer food waste typically comes from prep stations in restaurants or kitchens while post-consumer waste would also include plate scrapings. Pre-consumer material is typically cleaner and requires less screening and contaminant removal while post-consumer material is more process-intensive.

General Comments

- Adopted by dozens of communities throughout California and the U.S.
- Capable of diverting tens of thousands of tons per year in Kern County.
- Start-up costs for this program (e.g. new collection trucks, new containers, etc.) may be substantial, particularly if new facilities are required to compost organics.
- Commercial recycling is currently targeted by both the CIWMB and the Air Resources Board (through the AB 32 scoping plan) as the next major recycling effort due to the significant opportunity for progress and linkage to climate change.

Implementation Considerations

- Contractual arrangements with composting facilities will need to be made.
- A decision will need to be made whether to use an exclusive franchise system, permit system, open market system, or some combination of these (e.g. franchised "hauler of last resort" in an open market).
- The appropriateness of various implementation tools for the affected community will need to be considered, such as:
    - Sales staff to contact a specific number of businesses each week to sell the service to them and help them with "right-sizing" of containers;
    - Universal provision of service (i.e., to all restaurant, institution, and/or food processing businesses);
    - A mandatory commercial food waste recycling ordinance which requires all customers with a certain type of business to participate in food waste separation; and,
    - A landfill ban which prohibits disposal of commercially-generated compostable organics in County landfills.

County of Kern
Program and Facility Alternatives

Commercial Food Waste

Key Considerations for Kern County

- The County should design rate structures for commercial food waste collection that provide substantial economic incentive for reducing garbage service levels and increasing food waste service levels. Progressive rate structuring with discounted or "free" food waste service tends to produce the best results during the sales process.
- Provide for collection of food waste at least four days per week to reduce concerns regarding vectors, odor, and lack of space for storing materials.
- The success of these programs is directly tied to the effectiveness and pervasiveness of the public education and outreach strategy tied to them. These programs are typically most successful when a sales and outreach staff is used to promote them.

Environmental Considerations

- Potential to divert between 9,198 and 100,209 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions. These may be partially off-set if compost facilities are located closer to collection locations than disposal or transfer facilities.
- Greenhouse gas emissions reductions are associated with composting of organics due to reduced CH_4 generation relative to landfilling. This program may help with the County's compliance with AB 32.

Estimated Costs

- Low $27.86 per diverted ton.
- High $122.36 per diverted ton.

Model Programs

- San Jose, CA; Menlo Park, CA; Berkeley, CA; West Hollywood, CA

County of Kern
Program and Facility Alternatives

Commercial Recycling

Program/Facility Description

Commercial customers are provided with containers to separate and collect specific materials from the commercial sector. Most businesses would benefit from a "single stream" system while some have specific enough waste types that they could be provided with "scrap metal", "wood", "cardboard-only", or "mixed paper" service. The franchised hauler collects these materials and delivers them to a processing facility to be sorted and readied for market.

General Comments

- Widely adopted by communities throughout California and the U.S.
- Proven to generate participation rates of up to 75% and diversion rates of up to 45% from the commercial sector.
- Start-up costs for this program (e.g. new collection trucks, new containers, etc.) may be substantial, particularly if new facilities are required to process recyclables.
- Commercial recycling is currently targeted by both the CIWMB and the Air Resources Board (through the AB32 scoping plan) as the next major recycling effort due to the significant opportunity for progress and linkage to climate change.

Implementation Considerations

- Franchise agreements will need to be amended with the current franchisees.
- Contractual arrangements with recyclables processing and composting facilities will need to be made.
- The County will have to determine whether to use an exclusive franchise system, permit system, open market system, or some combination of these (e.g. franchised "hauler of last resort" in an open market).
- The appropriateness of various implementation tools for the affected community, will need to be considered such as:
    - Recycling sales staff to contact a specific number of businesses each week to sell the service to them and help them with "right-sizing" of containers;
    - Universal provision of service to all commercial customers as is commonly done for residential programs;
    - A mandatory commercial recycling ordinance which requires all customers over a specific generation (i.e. cubic yards per week) threshold to recycle; and,
    - A landfill ban which prohibits disposal of specific recyclable materials in County landfills.

County of Kern
Program and Facility Alternatives

Commercial Recycling

Key Considerations for Kern County

- Design rate structures for commercial recycling that provide substantial economic incentive to the generator for reducing garbage service levels and increasing recycling service levels. Progressive rate structuring with discounted or free recycling service tends to produce the best results during the sales process.
- Provide for collection of recyclable materials at least three days per week to reduce concerns regarding lack of space for storing materials.
- The success of these programs is directly tied to the effectiveness and pervasiveness of the public education and outreach strategy tied to them. These programs are typically most successful when a sales and outreach staff is used to promote them.
- Contamination of recyclables can significantly degrade the market value of the resulting commodities. Significant education, outreach, and enforcement efforts are typically necessary in the first months and years of these programs to minimize contamination.

Environmental Considerations

- Potential to divert between 18,077 and 111,326 tons per year.
- Promotes the highest and best use of materials.
- Trip frequency may increase from adding containers to the collections system resulting in increased emissions. These may be partially off-set if processing facilities are located closer to collection locations than disposal or transfer facilities.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $(38.15) per diverted ton.
- High $274.27 per diverted ton.

Model Programs

- Fresno, CA; San Jose, CA; Livermore, CA; Fremont, CA; San Diego, CA

County of Kern
Program and Facility Alternatives

Large Event & Venue Recycling

Program/Facility Description

Provide for recycling programs at all large events and venues throughout the County. Services would include educational materials, on-site staffing, recycling containers, hauling of collected materials, and training of facilities or operations staff.

General Comments

- This program was given state-wide legislative priority with the passage of AB2176, requiring that all large events or venues with an average of 2,000 attendees per day or more develop a recycling plan and report on their progress against that plan.
- Many local jurisdictions are taking the legislative mandate further through development of local ordinances or by providing for services through franchises or through service contracts with local conservation corps or non-profits.
- Event and venue recycling typically results in low diversion tonnage yields. Instead of being viewed as a significant diversion opportunity, the program should be viewed as a public education and outreach tool to increase awareness and encourage the "recycling ethic."

Implementation Considerations

- Determine whether a "policy" approach or "service provider" approach are better for the community and which will be more effective with event coordinators.
- Ordinance documents are required; if a policy approach is used.
- Contracts or contract amendments are required; if a service provider approach is used.
- Develop collateral education and outreach materials with a uniform theme to be used at events. Focus materials on providing graphic or actual examples of acceptable materials.
- Establish thresholds for the size of events which qualify for service.
- Establish performance standards and reporting requirements for either the event organizer (if a policy approach is used) or for the service provider (if the service provider approach is used).

Key Considerations for Kern County

- If a service provider approach is used, require that recycling services be provided at no additional cost to the service recipient provided that the recipient is also receiving for-fee trash service.
- Consider purchasing containers that are specifically designed for event and venue recycling (e.g. Clear-Streams or Windsor Barrels) which can be easily broken down and transported so they can be used at various events throughout the County.

County of Kern
Program and Facility Alternatives

Large Event & Venue Recycling

- Phase the program in over time to test and refine by using: 1) a tiered implementation for the policy approach (e.g. in year one, all events or venues over 10,000 attendees must comply; in year two, all events and venues over 5,000 attendees must comply; in year three, all events and venues over 1,000 attendees must comply.); or, 2) a pilot program with three to five events using the service provider approach.
- Consider implementing food waste collection and composting programs after a few years of success with basic recycling and outreach.

Environmental Considerations

- Potential to divert between 21 and 58 tons per year.

Estimated Costs

- Low $299.49 per diverted ton.
- High $3,386.49 per diverted ton.

Model Programs

- Los Angeles, CA; Pasadena, CA; San Jose, CA; Alameda County, CA

County of Kern
Program and Facility Alternatives

Resource Recovery Park (Convenience Model)

Program/Facility Description

A resource recovery park is a facility that accepts public drop-off of a wide range of items which would otherwise be disposed of. The facility is designed on a similar concept as the recycling "rounds" that are currently in place at a number of the County's landfills (e.g. Bena). Customers enter the facility and are presented with numerous "stations" where items can be separated for recovery (e.g. traditional recyclables, organics, reuse and repair, metals, inerts, and Household Hazardous Wastes) prior to reaching the solid waste drop-off area. In the most sophisticated models the first stations pay customers for materials that are of value (e.g. scrap metals, CRV, etc.), progressing to "no-cost drop-off" areas (e.g. inerts, traditional recyclables, reuse and repair, etc.), and ending with a pay for disposal area for HHWs and solid waste.

General Comments

- Several facilities of this type exist in California and the recycling area at the Bena Landfill already implements many of the core concepts.
- A resource recovery park would provide the County's substantial self-haul population with real opportunities and incentives to reuse and recycle.

Implementation Considerations

- Ideal sites require a high volume of self-haul traffic. Because a sufficient footprint is necessary to accommodate traffic flow, they are often co-located with disposal, transfer, and/or processing capacity.
- Businesses (e.g. re-use or salvage building supplies store, glass or concrete recyclers, etc.) which use the discarded products may be supported at the site to return value to the local economy. Recycling Market Development Zone grants for such businesses may further improve the economics of this type of facility.

Key Considerations for Kern County

- A residential gate fee may be required to create an economic incentive for the generator to separate materials rather than disposing of them.
- New facilities being contemplated by the County (i.e. material recovery facility & transfer station in metro Bakersfield) could easily be designed to include the resource recovery park concept.
- Existing facilities (e.g. McFarland-Delano Transfer Station, Bena Landfill) already employ many of these concepts and could be slightly modified to incorporate economic incentives.

Environmental Considerations

- Potential to divert between 48,530 and 108,943 tons per year.

County of Kern
Program and Facility Alternatives

Resource Recovery Park (Convenience Model)

- Promotes the highest and best use of materials.
- No noticeable change in vehicle-related emissions.
- Greenhouse gas emissions reductions are associated with recycling due to reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $7.10 per diverted ton.
- High $16.83 per diverted ton.

Model Programs

- Del Norte County, Orange County

County of Kern
Program and Facility Alternatives

C&D Ordinance

Program/Facility Description

Construction and Demolition Debris (C&D) ordinances are a priority with the CIWMB and have become common in both high growth areas of the state as well as with jurisdictions that are reaching to obtain diversion beyond 50%. In the 2004 statewide waste characterization study, C&D debris accounted for approximately 22% of all materials that were disposed.

General Comments

- C&D ordinances are common in California jurisdictions.
- There are three major regulatory approaches available:
  - Generator-based - Requires the individual who pulls the construction or demolition permit to ensure that materials are recycled. This is the most socially engaging regulation strategy as it installs the recycling ethic into the contractor and their employees, which acts to both educate and divert material in the same strategy. However, this regulatory framework has numerous loopholes (e.g. omitting landfill receipts from reporting to increase the percentage of recycling) which make this system either less effective or more onerous for the regulator to investigate.
  - Hauler-based - Requires permitted or franchised haulers to certify that all material that they collect from construction sites is recycled either through source separation or via mixed C&D Material Recovery Facilities (MRF). These regulatory systems, at their most effective, also prohibit construction companies from self-hauling materials. This regulatory framework reduces the number of actors who must be regulated and the resulting cost of administering the regulation. This regulatory framework contains certain loopholes (e.g. haulers misreport origin or material type to avoid regulation of certain loads). However, these types of issues are less prevalent as the system becomes more mature, education and outreach are increased, and enforcement is demonstrated. The hauler-based system tends to minimize the activity and involvement of the contractor doing the work and thus makes this a less effective mechanism for instilling the social ethic of recycling.
  - Facility-based -Requires that all C&D permit holders deliver their materials to an approved facility for recycling (typically from a list of certified facilities). Ideally, these facilities could be co-located with existing transfer stations or landfills to increase convenience to the generator and reduce the potential costs of permitting and site acquisition.

County of Kern
Program and Facility Alternatives

C&D Ordinance

Implementation Considerations

Generator-based:

- Create a threshold for qualifying projects (e.g. $100,000 for construction, $50,000 for demolition, 1,000 sq. ft. of total alteration, etc.).
- Require preparation of a waste management plan for all qualifying projects that indicates how the contractor intends to ensure the recycling or reuse of discarded materials.
- Require each project that meets a threshold to achieve overall percentage of material recovery (e.g. 50%) and individually for the specific material types which are easily recoverable (e.g. 100% of concrete, asphalt, dirt, etc.).
- Mandate reporting requirements for the project to demonstrate that they have achieved their plan. This demonstration is typically made through the provision of weight tickets from recycling and landfill facilities.
- Institute some penalty for failure to comply with the ordinance (e.g. deposit not refunded, fines, will not issue occupancy permit, etc.).

Hauler-based:

- Create minimum recycling levels for C&D (e.g. 50% of all materials collected and 100% of inert materials).
- Outline penalties (e.g. revocation of permit/franchise or liquidated damages) for failure to meet those requirements.
- Require that haulers be certified monthly or quarterly via review of documents to ensure that requirements are met.

Facility-based:

- Consider prohibiting unprocessed C&D loads exceeding a pre-specified volume (e.g. 12 cubic yards) from the landfill. Gatehouse staff would redirect loads to sorting facility.
- Alternatively, charge a higher rate for unsorted C&D materials to recover the cost of transferring materials to a county-contracted C&D MRF.
- Certify processing facilities as meeting minimum recycling thresholds (e.g. 50% of all inbound materials and 100% of all inert materials) through an annual document review by the regulatory agency (e.g. waste management department) as well as periodic on-site visits to verify that the facility is not sending excessive amounts of recoverable materials to the landfill.

County of Kern
Program and Facility Alternatives

C&D Ordinance

Key Considerations for Kern County

- If a generator-based system is implemented, more mixed C&D MRFs are needed to create the market forces necessary to eliminate the incentives to "cheat" the system.
- If a generator-based system is implemented, it will be important to add staff at the permit counter who will have sufficient education and qualifications and will be responsible to verify the reasonableness of waste management plans and educate contractors.
- If a generator-based system is implemented, it may be most effective if paired with a facility-based system to capture the "below-threshold" projects and contractor-hauled materials.
- If a hauler-based system is implemented the County must be assured that reporting from haulers will be reliable and accurate and that they will have access to hauler records for the purposes of auditing.
- If a facility-based system is implemented, additional processing capacity will be required throughout the County either through expansion of the current C&D processing at the Mt. Vernon and Tehachapi recycling centers or through development of processing sites collocated at County transfer stations and landfills.
- No matter which system is chosen, frequent and ongoing education to C&D generators, haulers, and facilities will be the key to program success. These programs tend to operate at their best when the contractors internalize recycling into their operations.

Environmental Considerations

- Potential to divert between 39,299 and 155,043 tons per year.
- There could be significant local reductions in greenhouse gas, ozone-forming and smog-forming pollution generation resulting from recycling concrete and asphalt from reduced manufacturing processes.

Estimated Costs

- Low $46.64 per diverted ton.
- High $63.11 per diverted ton.

Model Programs

- Generator-based program – Livermore, CA, Santa Fe Springs, CA, Lawndale, CA
- Hauler-based program – Dublin, CA, Rancho Santa Margarita, CA, Dana Point, CA
- Facility-based program – San Jose, CA, Orange, CA

County of Kern
Program and Facility Alternatives

Reuse Store

Program/Facility Description

A reuse store has two components to it: 1) a drop-off service at which people can deliver unwanted but still serviceable goods; and, 2) a retail store where other people can find items they want at a low price. The reuse store may be operated by a sole proprietor, a local handy-man, a non-profit (e.g. BARC, Salvation Army, etc.), a municipal agency, or a traditional recycler/hauler/solid waste facility operator.

General Comments

- Items are received from the general public through "drop-off" or scavenging of materials from the local County-owned landfill or transfer station. Some merchandise can be sold to the store for money or a store credit, but the majority of items require too much repair or refurbishing and are taken only as donations. Items taken as donations could also offset some of the program costs.
- Target items for the store could include, but are certainly not limited to: clothing, electronics, cookware, tableware, silverware, furniture, lamps, and building supplies.
- This store would provide the County's substantial self-haul population with expanded opportunities and incentives to reuse and recycle.

Implementation Considerations

- Ideal sites for receiving drop-off materials require a high volume of self-haul traffic. Because a sufficient footprint is necessary for traffic flow, they are often co-located with disposal, transfer, and/or processing facilities.
- In order to develop a sustainable and profitable business, the owner of the reuse store should develop, implement, and effectively operate a plan for targeting good saleable materials, repairing them, and returning as much into the economy as possible.
- If the reuse store could be added on to an existing or planned transfer station in the County, costs would be minimized.
- This re-use store could serve as an incubator business at County landfill or transfer station facilities to return value to the local economy. Recycling Market Development Zone grants for such businesses may further improve the economics of this type of facility.

Key Considerations for Kern County

- The County could potentially act as the re-use store owner and/or operator and use revenue derived from the re-use store to offset costs of operations. This tactic may help to facilitate the identification and recovery of materials through existing labor (i.e. waste aids and supervisors already working at the facilities) than would be possible for a small business.

County of Kern
Program and Facility Alternatives

Reuse Store

- Grant a salvage permit to the re-use store operator to allow them to target materials deposited at transfer stations or landfills for recovery.
- A residential gate fee may be required to create an economic incentive for the generator to separate materials rather than disposing of them.
- New facilities being contemplated by the County (i.e. material recovery facility & transfer station in metro Bakersfield) could easily be designed to include the re-use store on site.
- Existing facilities (e.g. McFarland-Delano Transfer Station, Bena Landfill) already employ many of the source separation concepts common to reuse stores and could be slightly modified to accommodate a re-use collection area on-site.

Environmental Considerations

- Potential to divert between 3,597 and 11,314 tons per year.
- The reuse store promotes the highest and best use of materials.
- No noticeable change in vehicle-related emissions.
- Greenhouse gas emissions reductions are associated with recycling due to the reduced need for the harvesting and processing of virgin materials.

Estimated Costs

- Low $12.07 per diverted ton.
- High $113.91 per diverted ton.

Model Programs

- Berkeley, CA

County of Kern
Program and Facility Alternatives

Illegal Dumping

Program/Facility Description

Solid waste managers, collection franchisees, code enforcement officers, community groups, and business organizations work together to identify illegal dumping "hot spots", provide targeted enforcement, report problems, collect and manage the material, and provide public education. Illegal dumping and littering are a significant social, political, financial, and environmental concern in Kern County. Added to that, this problem creates a significant drain on the resources of the County, cities, their solid waste franchisees, and private property owners. Illegal dumping is a criminal activity and is associated more with the values of the individual offender than with convenience (as evidenced by frequent illegal disposal in areas near transfer stations and landfills during operating hours) or cost (as evidenced by Kern County's free disposal system for residents).

General Comments

- Illegal dumping is a common problem in rural and agricultural communities.
- The CIWMB working group on this subject suggests viewing the problem as a criminal issue rather than waste management issue.
- Most effectively managed through a team approach.

Implementation Considerations

- Impose an advanced disposal fee ordinance to collect fees at the point of sale of the most commonly illegally dumped materials (i.e., furniture, appliances, tires, e-waste, vehicles, and vehicle parts). The fee system would directly fund illegal dumping enforcement, abatement, and/or public education activities.
- Appoint and commit resources to an Illegal Dumping Task Force including the Sherriff's Department and/or code enforcement, health department (Local Enforcement Agency), waste management department, and franchised solid waste haulers.
- Encourage other local government entities (i.e., cities and towns) to add either financial or human resources to this task force to assist in a regionalized effort. The local CalTrans office may also be a useful and willing participant in the task force, as they are tasked with litter and illegal dumping abatement on state-maintained highways.
- Incorporate abandoned waste collection requirements into franchise agreements. The franchisee in each service area would be responsible for promptly collecting illegally dumped materials reported by other members of the task force and for cooperating with the investigations of the enforcement agency. These provisions typically contain a threshold (e.g. 250 tons per year) which is provided by the service provider at no additional charge to the county and then a set cost per collection for all additional collections.

County of Kern
Program and Facility Alternatives

Illegal Dumping

Key Considerations for Kern County

- Revise the County's current policies which define two pieces of identia as "prima face evidence" of illegal dumping and allow for impounding of vehicles used in illegal dumping activities. Revise Title 8, Chapters 8.47-8.54 of the Kern County Ordinance Code (illegal dumping ordinance) to increase the State penalties and fines (Penal Code 370-374) for illegal dumping. The ordinance should also define investigative and enforcement responsibilities within the County.
- Make use of mandatory refuse collection ordinances in areas where illegal dumping is a significant concern. The CIWMB has identified that lack of mandatory collection increases the frequency of illegal dumping.
- The investigative and enforcement agency (e.g. Sherriff, code enforcement, health department) should have appropriate staffing levels which are specifically dedicated to the illegal dumping concern to ensure it is made a priority. The agency should investigate as many incidents of illegal dumping as possible with the goal of identifying the source and prosecuting offenders. Monies from prosecutions should be held in trust (e.g. environmental trust fund) to help offset the costs of education, abatement, and/or enforcement.
- The waste management department should apply for the CIWMB Farm and Ranch Grants to the greatest extent feasible to offset the costs of abatement efforts.
- The waste management department should be responsible for the development and management of a database, preferably tied to mapping software, which tracks the date, location, volume, and material types illegally disposed within the County. This information should be used to improve monitoring frequency and signage (e.g. illegal dumping will be prosecuted to the fullest extent of the law) at "hot spots", identify local and regional education needs, and report trends to the task force and Board of Supervisors.
- The waste management department currently manages a multi-lingual education and outreach campaign. This campaign should be evaluated by the task force and possibly refocused to emphasize the criminal and enforcement message.

Environmental Considerations

- Diversion resulting from this program is not readily quantifiable due to the lack of available information regarding the total amount or composition of materials which are illegally dumped in Kern County.
- Reductions in illegal dumping activity due to increased public awareness of this criminal activity and resulting improvements in community beautification and pride.
- Reduced environmental impacts of soil and groundwater contamination that results from illegally dumped materials.

County of Kern
Program and Facility Alternatives

Illegal Dumping

Estimated Costs

- Low - Additional program costs can be minimized through the use of reporting and enforcement teams including county employees from various departments and haulers. These individuals are already traveling on the roads in the County on a daily basis. Some communities (e.g. City of Los Banos) receive a donation of collection services for illegally dumped items from their franchised hauler. If an environmental trust fund is established and farm and ranch grants are actively pursued for clean-up efforts these costs can be eliminated entirely.
- High $530,220 annual program costs.

Model Programs

- Los Banos, CA; Riverside County, CA; Orange, CA; West Hollywood, CA; Kern County, CA

Appendix E

2015 Kern County Organics Diversion Strategy

2015 Kern County Organics Diversion Strategy

March 24, 2015

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Kern County Organics Diversion Strategy

Background

It has been over 25 years since the passage of Assembly Bill 939 enacted the Integrated Waste Management Act of 1989. The most widely known provision of AB 939 was the requirement for each jurisdiction to divert 25 percent of its waste stream from disposal by January 1, 1995, and to divert 50 percent of its waste stream by January 1, 2000. To inform the Board of Supervisors of the challenge ahead and to lay out a strategy to accomplish this feat, the newly formed Kern County Waste Management Department (Department) developed and brought to the Board the *Waste Diversion Plan, Implementing a County-Wide Strategy* on December 15, 1992. The *Waste Diversion Plan* contained a clearly articulated set of diversion goals necessary to guide County waste diversion planning efforts. These goals are:

1. Implement those programs first that make the most economic and public service sense.
2. Implement only those programs that would allow the County to comply with the law in a prudent, phased, and cost-effective manner.
3. Maximize the cost-effective life of our existing facilities.
4. Implement all programs in a manner that maximizes customer satisfaction.

Over the years, adherence to these goals lead to the implementation of successful, cost-effective, yet practical recycling programs. Practical recycling programs which targeted diversion of construction and demolition debris and green waste. Most jurisdictions outside Kern County initially implemented curbside recycling which required separate collection and significant investment in blue carts and Material Recovery Facilities, targeting only 7 percent of the waste stream at a cost of over $100 per diverted ton. The Kern County approach targeted 50 percent of the waste stream at a cost of $14 to $29 per diverted ton. These program decisions were reflective of the unique characteristics of the local waste stream, but were made possible due to the level of service and stability of the franchise hauling system, the strength and structure of the Solid Waste Enterprise Fund, a foundation of established solid waste infrastructure, and collaboration with our City partners. The original *Waste Diversion Plan* has been repeatedly updated with status reports in 1999, 2000, 2001, 2002, 2004, and 2006, informing the Board of legislative, regulatory and operational changes. Implementation of the *Waste Diversion Plan* has resulted in achieving 63 percent waste diversion countywide in 2013.

Regulation and Legislation

While the original impetus for waste diversion mandates was the specter of dwindling landfill capacity, climate change and the reduction of greenhouse gases is now the primary focus. The passage of Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006, required the California Air Resources Board (ARB) to develop a Scoping Plan that describes the approach California will take to achieve a sharp reduction of greenhouse gas (GHG) emissions to achieve the goal of reducing emissions to 1990 levels by 2020.

Section II.C.15 of the AB 32 Scoping Plan specifically recommends the following measures:

(Emphasis added)

> *Reduce methane emissions at landfills. <u>Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling</u>.*

Additionally, Section II.C.15 indicates that *"CIWMB will explore the use of incentives for all Recycling and Waste Management measures, including for <u>commercial recycling</u> and for <u>local</u>*

jurisdictions to encourage the collection of residentially and commercially-generated food scraps for composting and in-vessel anaerobic digestion."

AB 341, Mandatory Commercial Recycling was passed and implemented in 2012. AB 341 targeted businesses that generate 4 cy/week of cumulative solid waste including recyclables and compostable organics, multi-family residential properties with 5 units or more, and established a new state strategic goal where, by the year 2020, 75 percent of solid waste generated in the stated would be managed solely by source reduction, recycling and composting.

In August 2013, the Department informed the Board of Supervisors that according to Department of Resources Recycling and Recovery (CalRecycle) Organic Roadmap IV (2011), food waste is the largest fraction of compostable material disposed of statewide, comprising five million tons annually. Also, according to CalRecycle, diverting this amount of food waste to technologies such as anaerobic digestion and composting, statewide diversion could reach 75 percent when coupled with Mandatory Commercial Recycling.

Subsequently, on September 28, 2014, AB 1826, Mandatory Commercial Organic Recycling and AB 1594, Green Waste Alternate Daily Cover (ADC) were passed. AB 1826, Mandatory Commercial Organic Recycling requires businesses to recycle/compost organic waste. The legislation employs staged implementation beginning April 1, 2016 and culminating January 1, 2019. AB 1826 initially targets businesses that generate 8 cy/week of compostable organic waste and expands to include businesses that generate 4 cy/week of cumulative solid waste.

AB 1594 defines that green waste used as alternate daily cover (ADC) at landfills does not constitute diversion through recycling and would be considered disposal as of January 1, 2020. While AB 1594 will not significantly impact Kern County, it will significantly impact landfills in southern California, where the practice is fairly common.

The CalRecycle Organic Roadmap II (2008) projected that approximately 100 new and/or expanded composting facilities, a 50 percent increase, will be needed to reduce the amount of organics in the waste stream by 2020. Most of these facilities are expected to be sited in the Central Valley near agricultural markets. The State acknowledged that siting organic management facilities of any type would be very difficult given the proposed Air District and Water Board regulations.

The cumulative impact of AB 1826 and AB 1594, together with the increased Air District and Water Board regulations will significantly increase competition for existing private composting capacity, will increase operational costs and flood existing markets.

Existing Infrastructure and Programs

As noted above, in the early 1990's Kern County and the City of Bakersfield targeted green waste and wood waste diversion as a primary and necessary component to cost effectively meet the original AB 939 diversion mandates. The following factors informed this decision:

- A long growing season and large residential parcels resulted in green waste and landscape material comprising over 30 percent of the waste stream countywide.
- The standard frequency of residential trash service was twice per week due to relatively high seasonal temperatures.
- Distinctive to Kern County, garden/landscape services typically include the removal and delivery of landscape trimmings to a solid waste/composting facility.
- The Kern County agricultural industry affords local markets for compost.

The City of Bakersfield took the lead to develop the Mt. Vernon Green Waste Facility. In 1992, the County and City entered into a joint agreement to fund the composting facility. The Mt. Vernon Green Waste Facility was instrumental in creating an economic incentive for "clean green" waste by rejecting any contaminated yard waste. Gardeners/landscapers were responsible to keep the yard trimmings clean, free of litter and trash, or their loads would be rejected. Rejected green waste would necessitate a longer haul distance to the landfill. As a result, organic recycling of green waste and wood waste in the Metro area has been occurring successfully for over 20 years. In 2000, the County, the City and the franchise haulers implemented automated residential refuse collection and curbside collection of green waste. To accomplish this the frequency of service was modified from twice per week refuse collection to once per week refuse and once per week green waste collection for minimal additional cost.

Wood waste diversion was implemented at most County landfills and transfer stations in 1996. Wood waste consists of lumber and tree branches. The material is separated, stockpiled and ground. The ground wood waste is typically sold for biomass fuel to facilities such as Delano Energy, or used on-site for erosion control. Building on the success of the Metro green waste program and the County wood waste program, the County expanded green waste diversion at the Shafter-Wasco Recycling and Sanitary Landfill (RSLF) in 2003 and the Bena Sanitary Landfill (SLF) in 2004. A list of County facilities that process and divert green waste and wood waste is attached as Appendix A.

The San Joaquin Valley portion of Kern County has the following permitted private composting facilities:

- Community Recycling and Resource Recovery (CRRR) near Arvin,
- Synagro South Kern Compost Facility near Mettler, and
- Liberty Composting near Lost Hills.

CRRR accepts produce waste from large commercial grocers throughout the state as well as curbside green waste from the southern California. Synagro and Liberty, both biosolids composting facilities, primarily accept green waste from southern California. Both facilities have a Conditional Use Permit requirement to retain 10 percent of their permitted capacity to accept green waste or wood waste from Kern County jurisdictions.

Green waste from the Shafter-Wasco RSLF was initially transferred to Liberty Composting at a charge. The Department currently utilizes the Synagro Facility at no charge. Recently, the Department has implemented green waste screening and processing at the Shafter-Wasco RSLF to meet the more stringent acceptance criteria of the Synagro Compost Facility. It should be noted that typically, the private facilities do not accept self-haul organic waste nor do they accept non-screened or processed green waste collected straight from the curb.

A map of the network of public and private green waste processing/composting facilities is attached in Appendix B.

Funding and Program Considerations

In the state of California, the responsibility for providing adequate solid waste disposal capacity and services is assigned by the State to the County, while the responsibility for implementing recycling programs and achieving diversion mandates is assigned to individual jurisdictions. In most jurisdictions, public and private solid waste facilities charge a gate fee to cover the cost of facility operations for landfills, transfer stations, composting facilities, and recycling facilities. Residential and commercial customers pay the gate fee either through their collection/hauling services or directly at the gate of the facility. In the early 1990s, concerns over the increased cost of recycling and waste management services and the potential unintended consequence of

illegal dumping, prompted the Board of Supervisors to adopt a system by which residential parcels pay a Land Use Fee (LUF) collected on the tax roll, and commercial customers pay a Gate Fee (GF). The system incentivized businesses to recycle and discouraged illegal dumping by residents. The LUF/GF system was implemented countywide and taken together creates the Solid Waste Enterprise Fund. For the last 25 years, the Solid Waste Enterprise Fund has provided stable funding for the construction, operation and eventual closure of the landfills, transfer stations, and special waste facilities countywide, as well as the remediation and maintenance of the legacy burn dumps.

As diversion programs were initially developed, the County developed and operated diversion programs at landfills and transfer stations that were available to all residents and businesses, and cities developed and funded their individual programs. Therefore, when that City of Bakersfield developed the Mt. Vernon Green Waste Facility, the City and County entered into a long-standing agreement in which the City operated the facility and paid for city customers and the County contributed the pro-rated cost share for County customers. While this arrangement has worked to date because of the economies of scale created by the partnership of the County and the City in the Metro Bakersfield area, it has created certain inequities. Eventually, several of the outlying cities asked to utilize the Shafter-Wasco RSLF green waste diversion program for their curbside green waste programs. In an attempt to be consistent with the City of Bakersfield agreement, the Department requested the cities pay their pro-rated portion of the program cost. The cities initially declined this request which has stymied the development of organic diversion programs in the outlying areas. With pressure mounting from CalRecycle for certain cities to seriously tackle curbside residential green waste or face compliance orders, the cities need access to centrally located, cost-effective programs. Similarly, with the passage of AB 1826, both city haulers and franchise haulers will eventually need to develop commercial organic collection routes and will need access to organic facilities.

In August 2013, the Board of Supervisors adopted the 2013 Kern County Solid Waste Infrastructure Plan which identified and designated the necessary facilities to provide the organic diversion programs. As indicated in the Infrastructure Plan, the Mt. Vernon Green Waste Facility is currently providing excellent service to Metro Bakersfield. The Shafter-Wasco RSLF and Bena SLF have the ability to expand organic processing and service the valley communities, and the Mojave-Rosamond RSLF is ideally suited to provide similar services to the desert region.

Therefore, the Department believes it is in the best interest of the public to develop centrally located organic programs with a critical mass of green waste and wood waste to achieve cost effective organic processing and diversion for both residential and commercial customers. The Department can best achieve this by working together with the cities and the franchise haulers to handle as much of the organic waste stream within the County solid waste system and fee structure as possible. To accomplish this and resolve the inequities created by the existing policy of having each jurisdiction pay their pro rata share of curbside green waste processing while at the same time paying the Land Use Fee, the Department recommends that curbside green waste be accepted at the Mt. Vernon Green Waste Facility and at designated Kern County facilities at no charge and that the cost of processing and diversion be paid for by the Solid Waste Enterprise Fund. This will increase the County's pro rata share for the Mt. Vernon Green Waste Facility. But more importantly, this policy change is consistent with the transition from an emphasis on solid waste disposal to a confirmation of integrated waste management.

In the future, if the existing and proposed programs do not adequately divert sufficient volumes of organic waste from disposal, the County may need to consider implementing an economic incentive for residents and businesses, by charging for green waste at disposal sites.

"Chargeable" green waste could mean charging gardeners/landscaper for green waste disposal whether the green waste was generated from residential or commercial parcels. The Department realizes that a "chargeable" green waste policy may have unintended consequences that are not currently recognized, such as increased illegal dumping, increased contamination, and the need to develop separate commercial green waste collection. A "chargeable" green waste policy is also currently contrary to procedures at the Mt. Vernon Green Waste Facility. However, if the State implements an outright ban on the disposal of organic waste, as previously threatened, a "chargeable" green waste policy for disposal may be an appropriate tool to effect the needed change. The Department intends to keep this option open, but recognizes that a shift to "chargeable" green waste would be a significant change and needs further evaluation.

Development and Expansion of Green Waste Processing and Composting

Countywide, 72 percent of households currently have access to curbside green waste collection. Additionally, new curbside green waste collection programs are planned for certain Universal Collection Areas Cities are expected to implement curbside green waste programs provided they have convenient access to organics processing at no additional charge.

In the case of green waste, the Department proposes to enhance the capability and capacity to handle all residential green waste, including curbside collection programs, through existing facilities. The City of Bakersfield Green Waste Facility at Mt. Vernon is currently capable of processing and composting all residential curbside green waste collected in the Metro Bakersfield area as well as all residential and commercial green waste self-hauled to the facility.

The Department proposes to expand green waste processing and screening at the Shafter-Wasco, Bena and Mojave-Rosamond Landfills. Screened and consolidated green waste will then be transferred to the nearest composting facilities, as long as composting capacity is available through other facilities. It is projected that composting capacity will become increasingly scarce as AB 1826 and AB 1594 are phased-in statewide; therefore, the Department recommends developing full composting capability in the short term at the Shafter-Wasco RSLF. Eventually, composting capability may be warranted at the Mojave-Rosamond RSLF. This would likely be dependent on developing cost effective regional partnerships.

Green Waste Expansion Program Services

	FY 15/16	FY 16/17	FY 17/18	FY 18/19
Shafter-Wasco	Processing and Transfer	Processing and Transfer	Composting	Composting
Bena	Processing and Transfer	Processing and Transfer	Processing and Transfer	Processing and Transfer
Mojave-Rosamond			Processing and Transfer	Processing and Transfer

The Department has developed cost projections to implement the proposed organic waste program expansion as well as the increase in expenditures for the Mt. Vernon Green Waste Facility. The costs and expenditures have been factored into the Solid Waste Enterprise Fund 15-year financial forecast. The following table presents the short-term implementation costs by general category and fiscal year.

Green Waste Expansion Program Costs

	FY 15/16	FY 16/17	FY 17/18	FY 18/19	Total
Capital	$1,600,000	$6,760,000	$1,050,000	$0	$9,410,000
Labor	$0	$451,120	$631,720	$631,720	Annual/Ongoing
Maintenance	15,000	$90,000	$120,000	$120,000	Annual/Ongoing
Transport		$50,000	$150,000	$150,000	Annual/Ongoing
Mt. Vernon	$1,000,000	$1,100,000	$1,200,000	$1,200,000	Annual/Ongoing
Revenue		$250,000	$250,000	$250,000	Annual/Ongoing
Total	$1,615,000	$8,360,870	$3,151,470	$1,851,720	

Incorporating the existing residential curbside green waste programs into the Solid Waste Enterprise Fund is estimated to cover the cost of 109,000 tons per year of existing diversion. Implementing the expanded green waste diversion program is estimated to incorporate an additional 65,500 tons per year of green waste diversion at a total aggregate unit cost of $29/ton. Cost estimates are conservatively high. The Solid Waste Enterprise Fund 15-year financial forecast projects that long-term implementation of the Green Waste Expansion Program will necessitate requesting the Board to approve cost of living adjustments estimated at 3 percent for four consecutive years in FY 23/24 through FY 26/27 to maintain an available fund balance of $10 million in any one fiscal year. No other rate adjustments are projected prior to FY 23/24 for the Solid Waste Enterprise System. However, it should be noted that there are other legislative and industry dynamics that could additionally impact the Integrated Waste Management System. The Department will continue to be watchful and recommend adjustments as necessary.

Organic Recycling Challenges

With the existing hauling, processing and biomass infrastructure in Kern County, the County is well positioned to address the demands of Mandatory Commercial Organic Recycling for wood waste, and there is no need for expansion plans. However, there are indications that current wood waste markets may decline as the power purchase agreements of biomass facilities, such as Delano Energy, near expiration, and they have to compete with wind and solar projects under the Renewable Portfolio Standard. A decline in the biomass market will shift the diversion of urban and agricultural wood waste from biomass, a revenue generator, to composting at increased cost.

Additionally, food waste processing presents new challenges and opportunities. Food waste has a high intrinsic energy value for conversion to biogas coupled with significant odor challenges. While vegetative food waste can be traditionally composted along with green waste and wood waste, protein based food waste such as meat, fish, chicken and eggs can create odor issues when composted if not carefully managed.

To accommodate food waste, the City of Bakersfield has been conducting pilot/ demonstration composting projects over the last three years to modify the configuration of traditional windrows to Aerated Static Piles. Transitioning windrows to Aerated Static Piles shows great potential to conserve operational space, conserve water use, and also appears to allow existing composting facilities to meet the Air District and Water Board standards while accommodating more food waste. It is currently uncertain whether new/expanding facilities will be able take advantage of the Aerated Static Pile system, or whether new/expanding facilities will be held to a more

stringent standard, such as an in-vessel composting system. For the purposes of projecting the costs to expand the green waste program, the Department used the more conservative estimates of an in-vessel composting system at the Shafter-Wasco Integrated Waste Management Facility.

It is fairly certain that given the aim of AB 1826, to define compostable organics as food waste, green waste, landscape and pruning waste, wood waste and food-soiled paper waste that is mixed in with food waste, there will be pressure in the future to utilize existing curbside green waste collection to incorporate some food waste and food-soiled paper. The City of Arvin implemented this change in 2003 in an effort to meet the original AB 939 mandates. The Arvin curbside organic waste was initially composted at the Community Recycling and Resource Recovery Facility near Arvin, but is currently being composted at the Mt. Vernon Green Waste Facility.

While the existing private facilities of Synagro, Liberty and Community Recycling and Resource Recovery Facility are not currently permitted to accept the full range of food waste, it is expected that most private facilities are investigating ways to accommodate food waste and will pursue permit amendments to handle food waste in the near future. However, given the increasing demand and competition for composting capacity, the County cannot assume and depend on private facilities providing cost-effective composting capacity for the entire compostable organic waste stream in the County. Fortunately, existing County solid waste infrastructure is suited to meet this demand as needed. The Department proposes to work with our partners and continue to research and analyze options to best meet the food waste diversion challenge.

Conclusions and Recommendations

The Waste Management Department is committed to constantly improving the way in which we manage the County's waste stream and recognizes that organic waste management is the next big challenge. Over the last 25 years, the recycling, composting and disposal infrastructure have become truly integrated, and are poised to expand and evolve to meet the legislative mandates of AB 1826 and AB 1594. The Department believes it is in the best interests of the public to develop centrally located organic programs with a critical mass of green waste and wood waste to achieve cost effective organic processing and diversion for both residential and commercial customers. The Department has developed this plan to address the organic processing challenge.

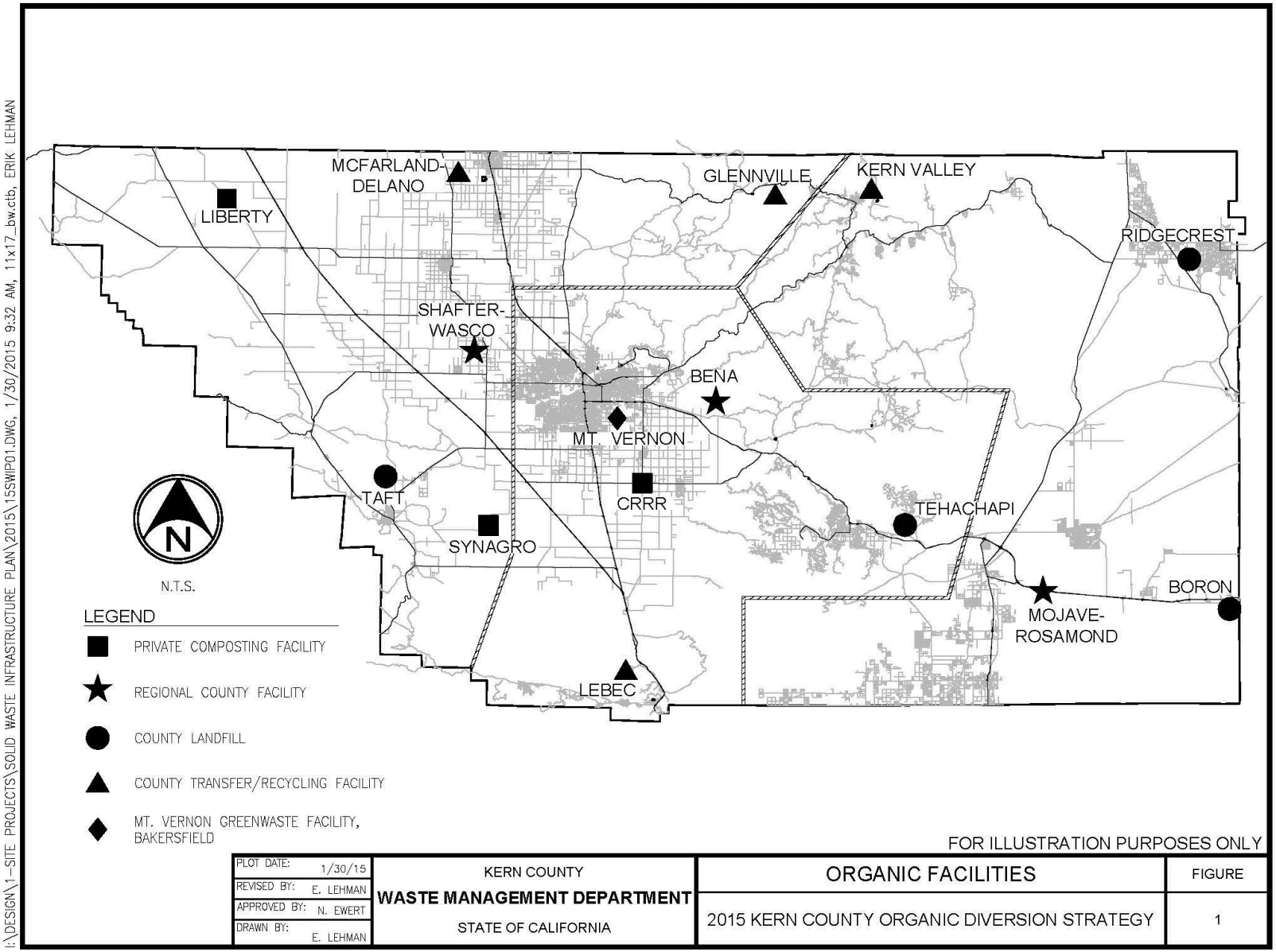
To accomplish this and resolve inequities created by existing policy, the Department recommends that curbside green waste be accepted at the Mt. Vernon Green Waste Facility and at designated Kern County facilities at no charge and that the cost of processing and diversion be paid for by the Solid Waste Enterprise Fund. This policy will strengthen the Solid Waste Enterprise Fund, promote organic recycling, and is consistent with the transition from an emphasis on solid waste disposal to a confirmation of integrated waste management.

APPENDIX A

Kern County Solid Waste Facilities
Existing Green Waste and Wood Waste Programs

	Green Waste	Wood Waste
Bena Landfill	X	X
Boron Landfill		
Kern Valley TS		X
Lebec TS	X	X
McFarland/Delano TS	X	X
Mojave-Rosamond		X
Ridgecrest Landfill		X
Shafter-Wasco Landfill	X	X
Taft Landfill	X	X
Tehachapi Landfill		X

APPENDIX B


MCFARLAND-DELANO
LIBERTY
GLENNVILLE
KERN VALLEY
RIDGECREST
SHAFTER-WASCO
BENA
MT. VERNON
TAFT
CRRR
TEHACHAPI
SYNAGRO
BORON
MOJAVE-ROSAMOND
LEBEC
N
N.T.S.
LEGEND
PRIVATE COMPOSTING FACILITY
REGIONAL COUNTY FACILITY
COUNTY LANDFILL
COUNTY TRANSFER/RECYCLING FACILITY
MT. VERNON GREENWASTE FACILITY, BAKERSFIELD
FOR ILLUSTRATION PURPOSES ONLY
PLOT DATE: 1/30/15
REVISED BY: E. LEHMAN
APPROVED BY: N. EWERT
DRAWN BY: E. LEHMAN
KERN COUNTY
WASTE MANAGEMENT DEPARTMENT
STATE OF CALIFORNIA
ORGANIC FACILITIES
2015 KERN COUNTY ORGANIC DIVERSION STRATEGY
FIGURE
1
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Appendix F

2013 Kern County Solid Waste Infrastructure Plan

2013 Kern County Solid Waste Infrastructure Plan

AUGUST 6, 2013

DOUGLAS E. LANDON, DIRECTOR
Waste Management Department
2700 M Street, Suite 500
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Printed on Recycled Paper

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2013 KERN COUNTY
SOLID WASTE INFRASTRUCTURE PLAN

Background

The Kern County Waste Management Department (Department) recognizes that solid waste facility siting, operations and closure are significant commitments of County resources. The Department is committed to constantly improving the way in which we manage the County's waste stream. In 1992, the Department developed the original Solid Waste Infrastructure Plan in which regulatory trends from the previous 30 years were evaluated and related to the County's experience in owning and operating landfills. The purpose of the Infrastructure Plan is to thoughtfully develop a comprehensive facility plan to handle the current and future solid waste needs of Kern County while attempting to anticipate and minimize future liabilities. The Department concluded that the economies of scale resulting from fewer, but larger, disposal sites would result in more cost effective disposal operations and limit future liability.

In 1995, the Department proposed consolidating 14 disposal sites down to five (5) regional disposal sites as a bold, yet prudent, move. In 2005, the Department further refined its strategy to limit risk and minimize future liabilities by committing to the following:

1. Site no new sanitary landfills; instead, expand existing disposal facilities only;
2. Further consolidate disposal sites down to three regional disposal sites; and
3. Protect landfill from encroachment of incompatible land uses by acquiring buffer zones around disposal sites.

Historically, Kern County has viewed disposal operations as a system, even though facilities are operated independently of one another. The original Infrastructure Plan networked the overall system of transfer stations and regional disposal sites to realize the efficiency, stability and security of an integrated waste management system. The *Solid Waste Infrastructure Plan* (1995 Infrastructure Plan) was first adopted by the Board of Supervisors on August 1, 1995 and provided a blueprint for the Countywide Siting Element. The *2005 Solid Waste Infrastructure Plan* (2005 Infrastructure Plan) updated the 1995 Infrastructure Plan. This document updates assumptions as well as the objectives of the 2005 Infrastructure Plan, provides a status update for each objective, outlines emerging issues and system impacts, and updates the implementation schedule. Lastly, the *2013 Kern County Solid Waste Infrastructure Plan* (2013 Infrastructure Plan) outlines a series of recommendations for the Board of Supervisors' consideration.

Planning Periods

The 1995 and 2005 Infrastructure Plans set forth goals for the short-, medium-, and long-term planning periods and scheduled the phasing of implementation. The 1995 and 2005 Infrastructure Plan's planning periods were as follows:

Short Term……Year 1990 to 2000 (complete)

Medium Term……Year 2001 to 2020

Long Term……Year 2021 to 2040

The 2013 Infrastructure Plan will amend these planning periods to provide for future amendments.

Period I…….Year 1990 to 2000 (complete)
Period II……Year 2000 to 2010 (complete)
Period III……Year 2010 to 2020 (in progress)
Period IV……Year 2020 to 2030
Period V…….Year 2030 to 2040

Assumptions

The previous Kern County Solid Waste Infrastructure Plans were based on the following major assumptions:

A1 The level of County solid waste services will be balanced/equalized.

A2 Existing permitted landfill capacity will be fully utilized.

A3 The respective Annual Capacity Report provides the basis for growth projections and capacity utilization.

A4 The combination of Land Use Fee, Gate Fee and Certificates of Participation (COP) will allow the Department to fund the capital projects proposed by the Infrastructure Plan, while keeping fees to a minimum.

The 2013 Infrastructure Plan proposes to amend assumption A4 and eliminate the financing of capital projects through the issuance of COP.

As discussed above, the Department recognizes that solid waste facility siting, operations and closure are significant commitments of County resources. Solid waste landfills require decades to site and permit, sizable financial reserves to construct and a substantial financial assurance mechanism to maintain in perpetuity. While many jurisdictions are responsible for one or two solid waste facilities, Kern County is responsible for seven active landfills, eight closed landfills, seven transfer stations, three special waste facilities and 43 burn dumps.

Scheduling and financing the myriad of capital projects, as well as ongoing solid waste operations, is a daunting and complicated task but it is necessary to assure adequate funding and stable rates. The Department invests significant staff resources in developing and maintaining a minimum 10-year financial forecast and modeling various scenarios to optimize capital investment and operational efficiency. As a result of this extensive financial forecast and modeling tool, the Department was able to demonstrate to the Board of Supervisors in 2011 that significant savings could be realized by avoiding debt financing of future capital projects. The Board of Supervisors approved fee increases over two fiscal years to provide the additional revenue necessary to fully fund future capital projects. The Department has committed to eliminate the issuance of COPs as a future funding mechanism. Therefore, the Department recommends amending Assumption 4 as follows:

A4 The combination of Land Use Fee and Gate Fee will allow the Department to fund the capital projects proposed by the Infrastructure Plan, while keeping fees to a minimum.

Goals and Objectives

The primary goal of the Kern County Solid Waste Infrastructure Plan is to project the future solid waste facility needs of Kern County. Kern County must accomplish this while responsibly addressing environmental, social, political and economic issues associated with developing, operating, and maintaining solid waste facilities. Specific objectives updated and addressed in the 2013 Infrastructure Plan include:

O1 Provide disposal capacity for at least 15 years for municipal solid waste;

O2 Respond to growth and waste generation spatial distribution;

O3 Assess facility options to achieve and maintain mandated source reduction and recycling goals;

O4 Assess facility options to provide adequate Household Hazardous Waste (HHW) collection and processing countywide;

O5 Balance level of service with economic and environmental constraints; and

O6 Develop a facility implementation schedule.

A status update for each objective is discussed below.

O1 PROVIDE DISPOSAL CAPACITY FOR AT LEAST 15 YEARS FOR MUNICIPAL SOLID WASTE

Annually, the Department updates and calculates municipal landfill capacity to assess the permitted disposal capacity in Kern County. Since 1990, the Department, together with the cities, landfill operators and haulers, have taken a number of steps to extend the capacity at Kern County landfills. As a result, many landfills have been able to operate up to 15 years longer than originally anticipated, maximizing the investment in existing facilities and postponing the need for replacement facilities. The primary reasons for extended life at Kern County landfills are as follows:

- Improved air space density as a result of better waste compaction and operations;
- Implementation of Alternate Daily Cover programs, using tarps in lieu of soil cover;
- Approval to vertically expand the Ridgecrest, Shafter-Wasco, Taft and Tehachapi landfills;
- Approval to expand the Mojave-Rosamond Landfill; and
- Effective waste diversion and recycling programs.

The 2013 Infrastructure Plan builds on data from the 2013 Capacity Study to project what facilities will be required in the future to ensure that Kern County residents and businesses have sufficient long-term disposal capacity (see Appendix A, "Kern County Disposal Capacity"). Utilizing the 2013 Capacity Study, current countywide permitted capacity is estimated to provide Kern County with approximately 37 years of disposal capacity. The full countywide master-planned capacity approved in California Environmental Quality Act (CEQA) documents is estimated to provide Kern County approximately 127 years of disposal capacity.

O2 RESPOND TO GROWTH AND WASTE SPATIAL DISTRIBUTION

Solid waste facility growth projections were developed in the 1990s and are tracked on an annual basis. From 2000 through 2005, receipt of waste at certain facilities increased faster than projections and faster than population growth. Starting in 2006, coincident with the economic recession, receipt of waste sharply declined 17% over four consecutive years, slowing in 2010. The Department develops trend analysis on a site-specific basis, considers new and/or pending legislation, and tracks several chief indicators to forecast disposal capacity utilization.

Despite the recent economic recession, the Department continues to forecast that four areas of the County have the greatest potential for significant growth. These areas include Rosamond, Tehachapi, Metro Bakersfield and the Interstate 5 corridor from Highway 99 through Tejon Ranch. The Department has worked diligently to optimize the disposal capacity and amend the operating permits at key facilities to provide for future growth.

However, the Interstate 5 corridor from Highway 99 through Tejon Ranch and southwest Bakersfield are not ideally serviced by any existing waste management facility. If growth and development continues, the Department projects that a new transfer station will be needed to service this area sometime after 2020. The Department also anticipates there will likely be a need to expand the Lebec Transfer Station to address the projected development of Tejon Mountain Village and other growth in the area.

The Department's approach to growth and development will continue to include:

- Active involvement in the planning process for all new development for both incorporated and unincorporated areas;
- Recommend mitigation measures for all large projects/developments;
- Require Universal Collection for all large new developments in the unincorporated area, depending on feasibility; and
- Incorporate curbside recycling and/or greenwaste services into Universal Collection Areas, as applicable.

O3 ASSESS FACILITY OPTIONS TO MAINTAIN AND ACHIEVE MANDATED DIVERSION GOALS

The passage of the Integrated Waste Management Act of 1989 (AB 939) mandating waste diversion resulted in the early development of diversion infrastructure, including the following:

- Diversion programs at County landfills and transfer stations;
- Tehachapi Recycling - Material Recovery Facility;
- Composting at the City of Bakersfield's Mt. Vernon Facility; and
- Construction and Demolition recycling by Granite Construction and Metropolitan Recycling Corporation (MRC).

The Non-Disposal Facility Element of the County Integrated Waste Management Plan identifies the public and private facilities located in Kern County supporting recycling and

diversion programs. Recycling and waste diversion facilities located within Kern County and identified in the Kern County Non-Disposal Facility Element are listed in Appendix B.

While a variety of facilities are located in Kern County, several cities contract for refuse collection and recycling services with private haulers which utilize recycling facilities that are located in other counties (i.e., Fresno County and Los Angeles County). Recycling and waste diversion facilities not located in Kern County, but utilized by Kern County jurisdictions, are also listed in Appendix B.

With the passage of AB 341 (Chesbro) in 2011, a new state goal was established where, by the year 2020, 75% of solid waste generated in the state would be managed solely by source reduction, recycling and composting. CalRecycle is currently developing a plan for achieving this new statewide goal to be submitted to the Legislature by January 2014. For calendar year 2011, the most current year of approved diversion reporting, the County unincorporated area had achieved 62.5% waste diversion, and the County and cities combined had achieved 62.8% waste diversion.

AB 341 also required that Mandatory Commercial Recycling (MCR) and Mandatory Multi-Family Residential Recycling be implemented by July 1, 2012. In response to AB 341, the County approved an MCR ordinance in 2012 to encourage compliance and facilitate monitoring of MCR. The County also approved implementation of mandatory residential curbside recycling in the Metro Bakersfield area and implementation of voluntary residential curbside recycling in the remainder of the unincorporated County. In anticipation of the passage of AB 341, several additional source separated recycling/processing facilities have been developed or expanded. In the metropolitan Bakersfield area, MRC, Inc., BARC and RockTenn, Inc., all provide recyclable and processing services. American Refuse, operating the Carousel Recycling facility in Wasco, provides service to northwest Kern County.

Currently, convenient solid waste collection services (including recycling and greenwaste collection and processing) have expanded throughout the County. Appendix C, "Residential Solid Waste Collection Services", indicates the availability of curbside solid waste collection services countywide. As of July 2013, mandatory or voluntary curbside recycling is available to 98% of the countywide population. Similarly, mandatory or voluntary curbside greenwaste collection is available to 72% of the countywide residential population.

The existing and recently expanded recycling infrastructure is projected to fully support the new MCR and Mandatory Multi-Family Residential Recycling, as well as the expanded mandatory and voluntary residential curbside programs. The Department recommends evaluating the effects of the full implementation of the above new programs prior to identifying new infrastructure to meet the 75% statewide goal. That said, the Department continues to track legislative and industry trends. According to Department of Resources Recycling and Recovery (CalRecycle) Organic Roadmap IV (2011), food waste is the largest fraction of compostable material disposed of statewide, comprising five million tons annually. Also, according to CalRecycle, diverting this amount of food waste to technologies such as anaerobic digestion and composting, statewide diversion could reach 75% when coupled with MCR. Draft legislation currently proposes to require mandatory organic (greenwaste and food waste) composting as early as 2018, and require existing solid waste facilities to provide organics programs.

The Metro Bakersfield area is currently served by the City of Bakersfield composting facility co-located with the Mt. Vernon Wastewater Treatment Plant. The Mt. Vernon greenwaste facility is ideally suited to implement anaerobic digestion for food waste. Similarly, the Department has been operating a valley-wide greenwaste diversion program included at the Shafter-Wasco Recycling and Sanitary Landfill for many years. The program transports greenwaste, collected from individual customer loads, to composting facilities elsewhere in Kern County. The Shafter-Wasco facility has the space and centralized location to expand the program, if warranted, including composting on site.

In addition to recycling and composting, there are existing and emerging technologies that can significantly reduce waste disposal by converting the waste to energy. Some of these technologies involve incineration of the waste and others limit oxygen to avoid combustion. Technologies that make the conversion without combustion are generally referred to as conversion technologies. In some cases, the preparation takes place in one location and the actual energy conversion takes place at another. The Department, for purposes of this Plan, will refer to the full range of these technologies as advanced/conversion technologies. These technologies have the potential to reduce waste disposal by as much as 80%.

Some of the key issues affecting the application of the advanced/conversion technologies are cost, environmental impact, reliability and whether CalRecycle will recognize the process as diversion or disposal. Despite these issues, the Department believes there is a lot of potential for one or more of these technologies to warrant application in the County system at some point. To this end, the Department has reserved sufficient space at the Bena, Mojave-Rosamond and Shafter-Wasco Recycling and Sanitary Landfills to accommodate advanced/conversion technology projects.

It is the Department's intention to rename these three facilities as Integrated Waste Management Facilities (IWMF) in recognition of the full range of service they can provide: recycling, household hazardous waste, composting, advanced/conversion technology and disposal. These three facilities are ideally located for regional support in the valley and desert.

O4 ASSESS FACILITY OPTIONS TO PROVIDE ADEQUATE HOUSEHOLD HAZARDOUS WASTE (HHW) COLLECTION AND PROCESSING COUNTYWIDE

In 1991, the Department prepared the Household Hazardous Waste Element (HHWE) of the Integrated Waste Management Plan. At the same time, the incorporated cities developed individual HHWEs designating the Department as the lead agency to design and implement HHW programs throughout the County, with funding provided by the Solid Waste Enterprise Fund. From 1990 through 1995, the Department conducted periodic one-day collection events throughout the County. A One-day collection event was held in Metro Bakersfield every "odd" year and small one-day collection events were held in the outlying areas every "even" year.

In 1995, the Department sited and permitted the Metro Bakersfield Special Waste Facility (SWF). Subsequently, the Department permitted permanent satellite facilities at the Mojave Airport (2005) and the Ridgecrest Landfill (2009). While the Metro Bakersfield SWF is opened four days per week to residents and businesses, the Mojave and Ridgecrest facilities are scaled down facilities that operate one day per month for residents and one day per

month for businesses. Satellite facilities allow the Department to provide frequent, periodic collection events on a set schedule, for which residents and businesses can anticipate and plan. A satellite facility provides equipment storage, eliminating the need to mobilize and de-mobilize for each collection event, saving staff resources. Most importantly, the satellite facility provides a safe, controlled environment for the collection of hazardous waste. Hazardous waste collected is categorized and transported to the Metro Bakersfield SWF for processing, consolidation and distribution/shipping.

Currently, in addition to the permanent SWFs, the Department continues to conduct eight one-day collection events annually: Kern Valley TS (2), Lebec TS (2), and the Tehachapi SLF (6). As these facilities are replaced or upgraded, the Department will assess the need to provide small satellite SWFs at each location. Similarly, the Department will assess the need and efficiency of relocating the Mojave SWF from the Mojave Airport to the Mojave-Rosamond IWMF once the regional facility is constructed.

The Department continues to provide full special waste collection services countywide. The programs have been expanded to include sharps, pharmaceuticals, e-waste and universal waste (fluorescent tubes and batteries). The Department continues to leverage the existing infrastructure to provide full integrated waste management services.

O5 BALANCE LEVEL OF SERVICE WITH ECONOMIC AND ENVIRONMENTAL CONSTRAINTS

The 2005 Infrastructure Plan recognized as an objective to "balance the level of service with economic and environmental constraints." The Infrastructure Plan recognized that one standard of service applied to all County solid waste facilities was not realistic. For example, keeping all facilities open 10 hours per day, 360 days per year when some facilities received as much as 1,000 tons and 373 vehicles per day while others received only 11 tons and 47 vehicles per day, was not prudent or practical. In 2001, the Department conducted an evaluation and held a series of public meetings to discuss facility usage and operational efficiency. As a result, the operating days and hours of each facility were tailored to community demand and customer usage; for example, the Bena Landfill is operated 56 hours/seven days per week, with an additional 11 hours reserved for franchise haulers. By contrast, the Keene Transfer Station is open 20 hours/three days per week.

Additionally, the Department evaluated service area, facility location and customer travel time on a system-wide basis. While most facilities were intentionally sited in the early 1970s to provide reasonable access for self-haulers from each service area, the closure of the China Grade Landfill and the siting of the Bena Landfill, the growth in Metro Bakersfield and the implementation of Universal Refuse Collection significantly changed waste-shed dynamics. For example, the City of Arvin and community of Lamont, originally serviced by the Arvin Landfill, are geographically closer than downtown Bakersfield to the Bena Landfill and are covered by mandatory refuse collection. Similarly, transfer stations such as Caliente and Buttonwillow were less than ten miles from regional facilities, but with no mandatory refuse collection. The data indicated that 98% of the Kern County population could be serviced by a facility with no more than a "30-minute" drive. With 80% of the Kern County population required to have mandatory refuse collection, at a cost of approximately $200 per parcel per year, it was concluded that sustaining the operation of small facilities to provide convenient

service to residents that could subscribe to refuse collection services or had reasonably close alternative facilities (less than 30-minute drive) was not warranted.

As a result, the Department recommended no replacement of the Arvin Landfill when the facility reached capacity in 2003. Additionally, when Universal Refuse Collection was implemented in Lost Hills, the Department recommended closure of the Lost Hills Transfer Station. In 2010, as part of a number of cost cutting measures, the Department recommended closure of the Buttonwillow, Caliente, Keene and Randsburg Transfer Stations. Following a series of public meetings, Universal Refuse Collection was implemented in the Buttonwillow community and the transfer station was closed. The Caliente Transfer Station was also closed with residents utilizing the Loraine-Twin Oaks Transfer Station, Keene Transfer Station or Bena Landfill. But the communities near the Keene and Randsburg Transfer Stations, which have access to alternate facilities but where Universal Refuse Collection is difficult in some cases, elected to financially support the continued operation of the transfer station as an alternative to curbside collection or self-hauling to an alternate facility (less than 30-minute drive).

Evaluating the service level and customer travel time also led the Department to analyze the load size accepted at transfer stations. For example, the McFarland-Delano Transfer Station is located 24 miles from the Shafter-Wasco Landfill with a travel time of 35 minutes, while the Kern Valley Transfer Station is located 55 miles from the Ridgecrest Landfill with a travel time of over one hour. The Department determined that transferring small loads, such as pickup trucks and small trailers, is cost effective in both cases while transferring large loads such as packer trucks and dump trucks is only cost effective in the case of Kern Valley. As a result, all loads are accepted at the Kern Valley Transfer Station while the McFarland-Delano Transfer Station has a limit of 20 cubic yards. The Department informally refers to these transfer stations with limitations on inbound vehicle volume as "self-haul" transfer stations.

Therefore, by applying a reasonable standard for facility operation and refuse collection services, the following have been implemented to balance the level of waste handling services and waste collection services:

- Tailor days and hours of operation commensurate with community demand and usage;
- Limit volume of waste accepted at transfer stations based on haul distance to nearest disposal site;
- Implement a "30-minute" travel standard for small volume customers as a guideline for facility retention/siting;
- Provide communities with options to elect alternate levels of service when appropriate; and
- Implement Universal Refuse Collection as appropriate.

Facility Modification and Consolidation

Facility	Year	Action/Alternate Facility or Service
McFarland-Delano TS	2001	Limited to small volume loads (< 20 CY)
Arvin Landfill	2003	Closed - Redirected to Bena Landfill
Lost Hills TS	2004	Closed - Universal Collection Implemented
Buttonwillow TS	2011	Closed - Universal Collection/Shafter-Wasco SLF
Caliente TS	2011	Closed - Bena Landfill or Keene TS
Keene TS	2011	Retained - Alternate Universal Collection
Randsburg TS	2011	Retained - Alternate Universal Collection

Consistent with these policies, the Department proposes to maintain the level of service in the Tehachapi area by replacing the Tehachapi Landfill, which is projected to reach capacity in March 2017, with a self-haul transfer station on the existing site. However, to optimize disposal facility operations and postpone capital expenditures, the Department proposes to re-direct the Tehachapi waste stream to the Bena Landfill, rather than the Mojave-Rosamond Landfill as identified in the 2005 Infrastructure Plan. The Department projects that this realignment will save the Solid Waste Enterprise Fund approximately $260,000 per year in operational costs and postpone the expenditure of approximately $12 million in capital improvements over a three-year period.

O6 DEVELOP A FACILITY IMPLEMENTATION SCHEDULE

The Infrastructure Plan provides the Board of Supervisors with a tentative schedule for existing facility closure and new facility construction. Operational efficiencies and facility expansions continue to result in extending the capacity and site life at many facilities. The Department continues to update the Landfill Capacity Report on an annual basis and will update the Infrastructure Plan as needed.

Facility Extended Capacity

Facility	2005 Projected Closure Date Permitted Disposal Capacity	2013 Projected Closure Date Permitted/(Site) Capacity
Bena RSLF	2039	2046/2155*
Boron SLF	2031	2040
Mojave-Rosamond RSLF	2015	2024/2129*
Ridgecrest RSLF	2014	2050
Shafter-Wasco RSLF	2028	2058
Taft RSLF	2045	2079
Tehachapi RSLF	2008	2017

* Closure Date represents the projection based on the capacity listed in the CEQA documents for the entire landfill site.

PERIOD I (1990-2000):

The Department has implemented the 1995 Infrastructure Plan. While operational efficiency resulted in extending the capacity at many sites, as these sites eventually reached capacity they were closed. During the short term planning period, six landfills reached capacity, five landfills were replaced with transfer stations, and the China Grade SLF was replaced with the Bena SLF.

PHASE I (1990-2000) 1990 FACILITY STATUS			
Transfer Stations	**Active Landfills**	**Special Waste**	**Closed Landfills**
Caliente (1974)	Arvin		
Keene (1974)	Boron		
Lor-Twin Oaks (1974)	Buttonwillow		
Randsburg (1976)	China Grade		
	Glennville		
	Kern Valley		
	Lebec		
	Lost Hills		
	McFarland-Delano		
	Mojave-Rosamond		
	Ridgecrest		
	Shafter-Wasco		
	Taft		
	Tehachapi		

PHASE I (1990-2000) 2000 FACILITY STATUS			
Transfer Stations	**Active Landfills**	**Special Waste**	**Closed Landfills**
Caliente (1974)	Arvin	**Bakersfield (1995)**	**Lebec (1991)**
Keene (1974)	**Bena**		**Glennville (1991)**
Lor-Twin Oaks (1974)	Boron		**McF-Delano (1992)**
Randsburg (1976)	Lost Hills		**China Grade (1992)**
Lebec (1991)	Mojave-Rosamond		**Buttonwillow (1996)**
Glennville (1991)	Ridgecrest		**Kern Valley (1997)**
McFarland-Delano (1992)	Shafter-Wasco		
Buttonwillow (1996)	Taft		
Kern Valley (1997)	Tehachapi		

The Infrastructure Plan Period I implementation is complete.

PERIOD II (2000-2010):

During Period II, one landfill closed due to depleted capacity: Arvin SLF (2003). Due to the proximity of the Arvin and Lamont communities to the Bena Landfill, the Arvin facility was not replaced with a transfer station. The Lost Hills SLF was temporarily decommissioned

(mothballed) and replaced with a transfer station in 2001. Subsequently, universal refuse collection was implemented in Lost Hills in 2004 and the transfer station was closed.

PHASE II (2000-2010) 2010 FACILITY STATUS			
Transfer Stations	**Active Landfills**	**Special Waste**	**Closed Landfills**
Caliente (1974)	Bena	Bakersfield (1995)	Lebec (1991)
Keene (1974)	Boron		Glennville (1991)
Lor-Twin Oaks (1974)	Mojave-Rosamond	**Mojave (2005)**	McF-Delano (1992)
Randsburg (1976)	Ridgecrest	**Ridgecrest (2009)**	China Grade (1992)
Lebec (1991)	Shafter-Wasco		Buttonwillow (1996)
Glennville (1991)	Taft		Kern Valley (1997)
McFarland-Delano (1992)	Tehachapi		**Lost Hills (2001)**
Buttonwillow (1996)			**Arvin (2003)**
Kern Valley (1997)			
Lost Hills (2001-2004)			

The Infrastructure Plan Period II implementation is complete.

PERIOD III (2010-2020):

During Period III, Universal Collection was implemented in the community of Buttonwillow and the Buttonwillow Transfer Station was closed. The Caliente Transfer Station was also closed and residents re-directed to the Keene Transfer Station. Both closures were a consequence of cost-cutting measures brought on by economic recession. The Tehachapi Landfill is projected to reach capacity in 2017. The Department proposed to transition to a transfer station on the existing landfill site. The Department also recommends re-directing the Tehachapi waste stream temporarily to the Bena Landfill for operational efficiency and to postpone the capital construction of liner and road improvements at the Mojave-Rosamond Landfill.

The 2005 Infrastructure Plan identified the Taft Landfill and the Lost Hills Landfill as suitable for potential expansion, with either facility able to serve as the regional landfill for western Kern County. Since 2005, the Department has acquired buffer property surrounding the Shafter-Wasco Landfill. Additionally, the Department has worked with the State and Federal Wildlife agencies to amend the Kern County Solid Waste Facilities Habitat Conservation Plan. Both the Taft and Lost Hills Landfills are located in areas identified as prime habitat for a suite of endangered species. Expansion of either the Taft or Lost Hills facilities would require the acquisition of significant habitat offset. Re-evaluation of facility options show that the Shafter-Wasco facility provides a more centralized regional integrated waste management facility for western Kern County, while at the same time eliminating one additional transfer station and minimizing disturbance of prime habitat. Therefore, the Department recommends designating the Shafter-Wasco RSLF as the regional integrated waste management facility for western Kern County and relinquishing the remaining capacity of the Lost Hills site.

PHASE III (2010-2020) 2020 FACILITY STATUS			
Recycling Transfer Stations	**Active Landfills and IWMFs**	**Special Waste**	**Closed Landfills**
Keene (1974)	Bena IWMF (2155)*		Lebec (1991)
Lor-Twin Oaks (1974)	Boron SLF (2040)	Bakersfield (1995)	Glennville (1991)
Randsburg (1976)	Moj-Ros IWMF (2129)*	Mojave (2005)	McF-Delano (1992)
Lebec (1991)	Ridgecrest RSLF (2050)	Ridgecrest (2009)	China Grade (1992)
Glennville (1991)	Shafter-Wasco IWMF (2058)		Buttonwillow (1996)
McFarland-Delano (1992)	Taft RSLF (2079)		Kern Valley (1997)
Kern Valley (1997)			Lost Hills (2001)
Tehachapi (2017)		**Tehachapi (2017)**	Arvin (2003)
			Tehachapi (2017)

* The Mojave-Rosamond and Bena Landfill closure dates reflect CEQA approved capacity; all other facilities reflect CEQA and permitted capacity.

PHASE IV (2020-2030)

Due to the vertical expansions of the Shafter, Taft and Ridgecrest Landfills, no disposal facilities are expected to reach final capacity during Phase IV. Waste Management Unit 1 of the Mojave-Rosamond Landfill will reach capacity in 2024 and move into closure construction, with the facility expansion serving eastern Kern County until 2129. Growth projections indicate that sometime between 2020 and 2030, the Lebec Transfer Station will need to be upgraded and expanded to meet the development demands of the Tejon Mountain Village, including the potential of a satellite Special Waste Facility. Similarly, development of the Tejon Industrial Park and southwest Bakersfield indicate that a Metro/I-5 Corridor Transfer Station may be warranted.

PHASE IV (2020-2030) 2030 FACILITY STATUS			
Recycling Transfer Stations	**Active Landfills and IWMFs**	**Special Waste**	**Closed Landfills**
Keene (1974)	Bena IWMF (2155)*		Lebec (1991)
Lor-Twin Oaks (1974)	Boron SLF (2040)	Bakersfield (1995)	Glennville (1991)
Randsburg (1976)	Moj-Ros IWMF (2129)*	Mojave (2005)	McF-Delano (1992)
Lebec (1991)	Ridgecrest RSLF (2050)	Ridgecrest (2009)	China Grade (1992)
Glennville (1991)	Shafter-Wasco IWMF (2058)	***Lebec***	Buttonwillow (1996)
McFarland-Delano (1992)	Taft RSLF (2079)		Kern Valley (1997)
Kern Valley (1997)			Lost Hills (2001)
Tehachapi (2017)		**Tehachapi (2017)**	Arvin (2003)
Metro/I-5 Corridor			Tehachapi (2017)

Italicized facilities are proposed with uncertain dates of construction/operation

* The Mojave-Rosamond and Bena Landfill closure dates reflect CEQA approved capacity; all other facilities reflect CEQA and permitted capacity.

PHASE V (2030-2040)

During Phase V, the Boron Landfill will reach capacity and is proposed to be replaced by a self-haul transfer station.

PHASE V (2030-2040) 2030 FACILITY STATUS			
Recycling Transfer Stations	Active Landfills and IWMFs	Special Waste	Closed Landfills
Keene (1974)	Bena IWMF (2155)*	Bakersfield (1995)	Lebec (1991)
Lor-Twin Oaks (1974)	Moj-Ros IWMF (2129)*	Mojave (2005)	Glennville (1991)
Randsburg (1976)	Ridgecrest RSLF (2050)	Ridgecrest (2009)	McF-Delano (1992)
Lebec (1991)	Shafter-Wasco IWMF (2058)	***Lebec***	China Grade (1992)
Glennville (1991)	Taft RSLF (2079)		Buttonwillow (1996)
McFarland-Delano (1992)			Kern Valley (1997)
Kern Valley (1997)			Lost Hills (2001)
Tehachapi (2017)		Tehachapi (2017)	Arvin (2003)
Boron (2040)			Tehachapi (2017)
Metro/I-5 Corridor			**Boron (2040)**

Italicized facilities are proposed with uncertain dates of construction/operation

* The Mojave-Rosamond and Bena Landfill closure dates reflect CEQA approved capacity; all other facilities reflect CEQA and permitted capacity.

Infrastructure Plan Policy

Since 2005, the Department has completed the acquisition of almost all buffer properties adjacent to existing solid waste landfills and transfer stations, as well as the acquisition of facility and buffer properties to expand the Mojave-Rosamond Landfill into a regional facility for eastern Kern County.

The 2005 Infrastructure Plan identified Bena, Mojave-Rosamond and either Lost Hills or Taft as regional waste management facilities. Given the approved increased disposal capacity, the increased mandates for diversion and recycling programs, the habitat sensitivity of the Taft and Lost Hills facilities and the completion of buffer acquisition, the Department recommends utilizing the Shafter-Wasco Recycling and Sanitary Landfill as the third regional facility. The Shafter-Wasco facility is uniquely situated to provide full integrated waste management capacity for western Kern County, as well as support for the Metro Bakersfield area.

Regional Integrated Waste Management Facilities

Regional IWM Facilities	Service Area
Bakersfield Metro (Bena)	Arvin, Bakersfield, Frazier Park and Lebec
Mojave-Rosamond	Boron, California City, Kern Valley, Mojave, Ridgecrest, Rosamond and Tehachapi
Shafter-Wasco	Metro Bakersfield, Delano, McFarland, Shafter, Taft and Wasco

Lastly, while the original Infrastructure Plan was primarily focused on assuring adequate disposal capacity to Kern County residents and businesses, solid waste management has grown ever more integrated and complex. As a result, the functionality of Kern County solid waste facilities has expanded to provide integrated services including disposal, diversion, recycling and Household Hazardous Waste (HHW) collection and processing. These facilities are adequately protected, with the potential to provide full integrated waste management services into the 22nd century. The system of County owned facilities, complemented by the wide range of recycling/processing facilities, is projected to provide Kern County and the incorporated cities with the necessary recycling infrastructure to meet the statewide goal of 75% diversion by 2020.

The *2013 Kern County Solid Waste Infrastructure Plan* recommends the following modifications:

- Amend Assumption 4 to reflect that Certificates of Participation (COPs) will no longer be used to finance capital projects. The Solid Waste Enterprise Fund will accrue capital reserves to fund future capital projects.
- Designate the Shafter-Wasco Recycling and Sanitary Landfill as the third Regional Integrated Waste Management Facility to serve western Kern County, and relinquish the remaining disposal capacity of the Lost Hills Landfill.
- Adopt the policies outlined to balance the level of service with economic and environmental constraints.
- Upon closure of the Tehachapi Landfill and operation of the Tehachapi Transfer Station, re-direct the Tehachapi waste stream temporarily to the Bena Landfill for operational efficiency and to postpone the capital construction of liner and road improvements projected for the expansion of the Mojave-Rosamond IWMF.
- Recognize and reserve the Shafter IWMF, the Mojave IWMF and the Bena IWMF as the regional integrated waste management facilities, and designate these facilities for advanced/conversion technologies.

Conclusion

The Waste Management Department recognizes that waste facility siting, operations and closure are significant commitments of County resources. The Department is also committed to constantly improving the way in which we manage the County's waste stream. Therefore, in developing and updating the Infrastructure Plan, regulatory trends are evaluated and related to industry trends and the County's experience in owning and operating facilities. Over the last 25 years, the recycling, composting and disposal infrastructure have become truly integrated, and are poised to expand and evolve to include anaerobic digestion and advanced/conversion technology. Existing public and private solid waste infrastructure provides adequate recycling and composting capacity and is capable of being expanded to meet the 75% diversion goal by 2020. The Kern County solid waste infrastructure provides adequate Household Hazardous Waste (HHW) services and is capable of being expanded to meet public demand. And finally, the Kern County solid waste infrastructure provides adequate disposal capacity and is capable of meeting the projected integrated waste management needs of the County through 2040 and beyond.

APPENDIX A

Kern County
Permitted Disposal Capacity

Sanitary Landfill (SLF)	Jan. 1, 2013 Remaining Disposal Capacity (Tons)	Remaining Life Span (Years)	Estimated Closure Date
Arvin SLF	0	0	Closed
Bena SLF*	20,715,311	33.3	2046*
Boron SLF	92,380	27.6	2040
Buttonwillow SLF	0	0	Closed
China Grade SLF	0	0	Closed
Kern Valley SLF	0	0	Closed
Lebec SLF	0	0	Closed
Lost Hills SLF	0	0	Closed
McFarland-Delano	0	0	Closed
Mojave-Rosamond SLF *	312,117	11.3	2024*
Ridgecrest SLF	2,675,954	37.0	2050
Shafter-Wasco SLF	9,819,837	46.1	2058
Taft SLF	4,623,230	66.1	2079
Tehachapi SLF	247,822	4.2	2017
Composite Capacity	**38,486,651**	**37.5**	

* The Mojave-Rosamond and Bena Landfills have CEQA approved capacity that greatly exceeds permitted capacity.

APPENDIX B

Kern County Non-Disposal Facility Element

Facility	Diversion Program
Mt. Vernon Greenwaste & Composting	Composting
CRRR (Arvin)	Composting
Synagro	Composting
Tehachapi Recycling	Mixed Waste Processing
MRC at Mt. Vernon	C & D Recycling and Source Separated Processing
BARC	Source Separated Processing
RockTenn	Source Separated Processing
American Refuse	Source Separated Processing
Granite Construction	C & D Recycling
Bena Recycling and SLF	Diversion/Recycling Programs
Boron Recycling and SLF	Diversion/Recycling Programs
Mojave Recycling and SLF	Diversion/Recycling Programs
Ridgecrest Recycling and SLF	Diversion/Recycling Programs
Shafter-Wasco Recycling and SLF	Diversion/Recycling Programs
Taft Recycling and SLF	Diversion/Recycling Programs
Tehachapi Recycling and SLF	Diversion/Recycling Programs
Glennville Recycling and TS	Diversion/Recycling Programs
Kern Valley Recycling and TS	Diversion/Recycling Programs
Lebec Recycling and TS	Diversion/Recycling Programs
Lorraine-Twin Oaks TS	Diversion/Recycling Programs
McFarland-Delano Recycling and TS	Diversion/Recycling Programs
Sierra Iron and Metals	Metal Recycling
Golden State Metals	Metal Recycling

Out-of-County Non-Disposal Facilities

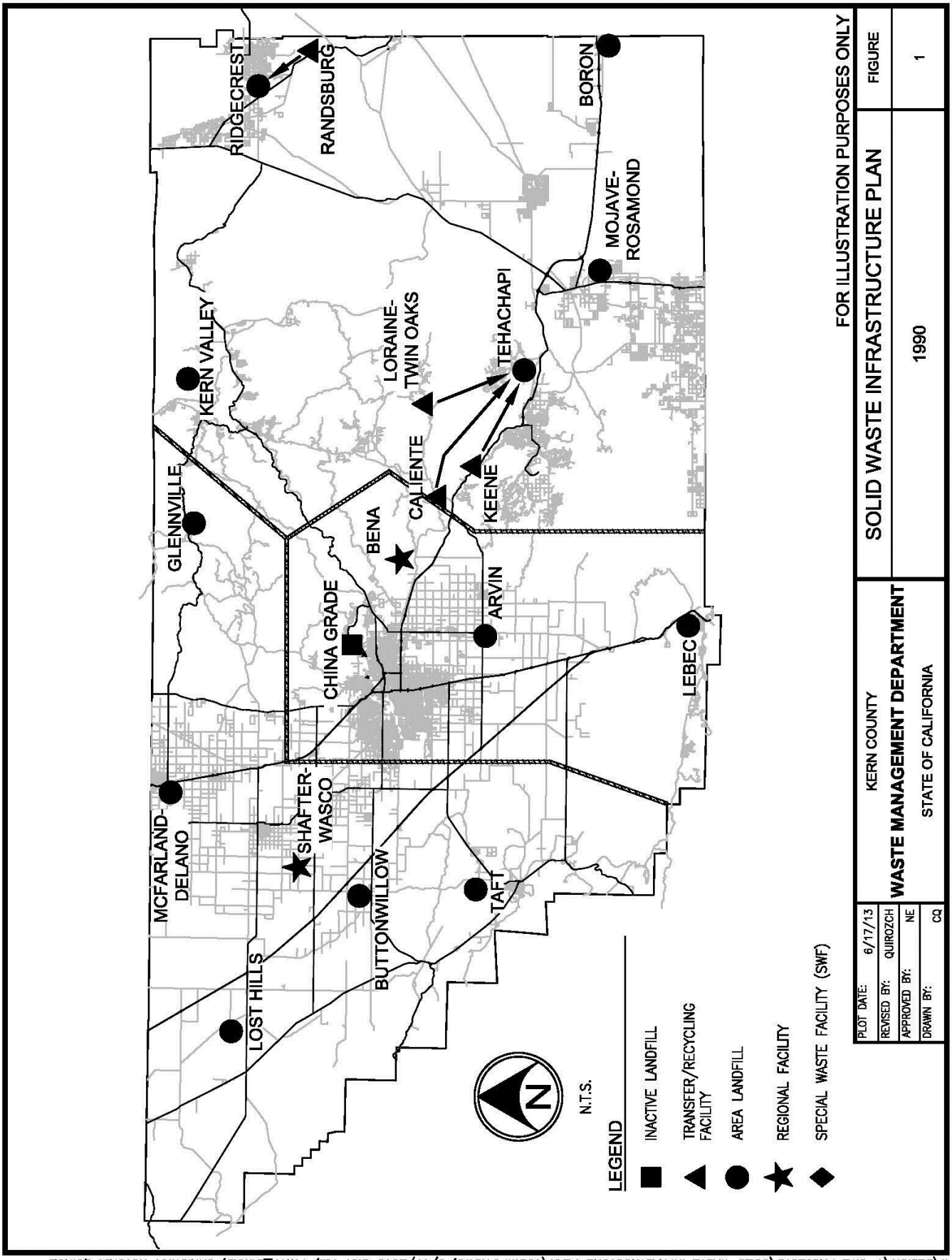
Facility	Diversion Program
Sunset (Fresno County)	Mixed Waste Processing
Waste Management, Inc. (LA County)	Mixed Waste Processing

APPENDIX C

Residential Solid Waste Collection Services

Incorporated Areas	Population (2012)	Refuse	Recycling	Greenwaste (Curbside)
Arvin	19,849	M	M	M
Bakersfield	354,480	M	M	M
California City	13,260	M	M	N/A
Delano	52,005	M	M	M
Maricopa	1,163	M	M	M
McFarland	12,333	M	M	M
Ridgecrest	28,089	V	V	N/A
Shafter	16,928	M	V	N/A
Taft	8,906	M	V	N/A
Tehachapi	13,872	M	M	N/A
Wasco	25,324	M	M	M
Incorporated Total/ Percent Availability	546,209	100%	100%	85%
Unincorporated Areas	**Population (2012)**	**Refuse**	**Recycling**	**Greenwaste (Curbside)**
Metro Bakersfield Universal Collection	149,433	M	M	M
Eastern Kern UCA	1,074	M	M	N/A
Other UCAs	12,885	M	V	N/A
Other Unincorporated	121,308	V	V	N/A
Permit Areas	19,096	V	N/A	N/A
Unincorporated Total/ Percent Availability	303,797	100%	94%	49%
Countywide Total/ Percent Availability	**850,006**	**100%**	**98%**	**72%**

(M) Mandatory, (V) Voluntary, (N/A) Not Available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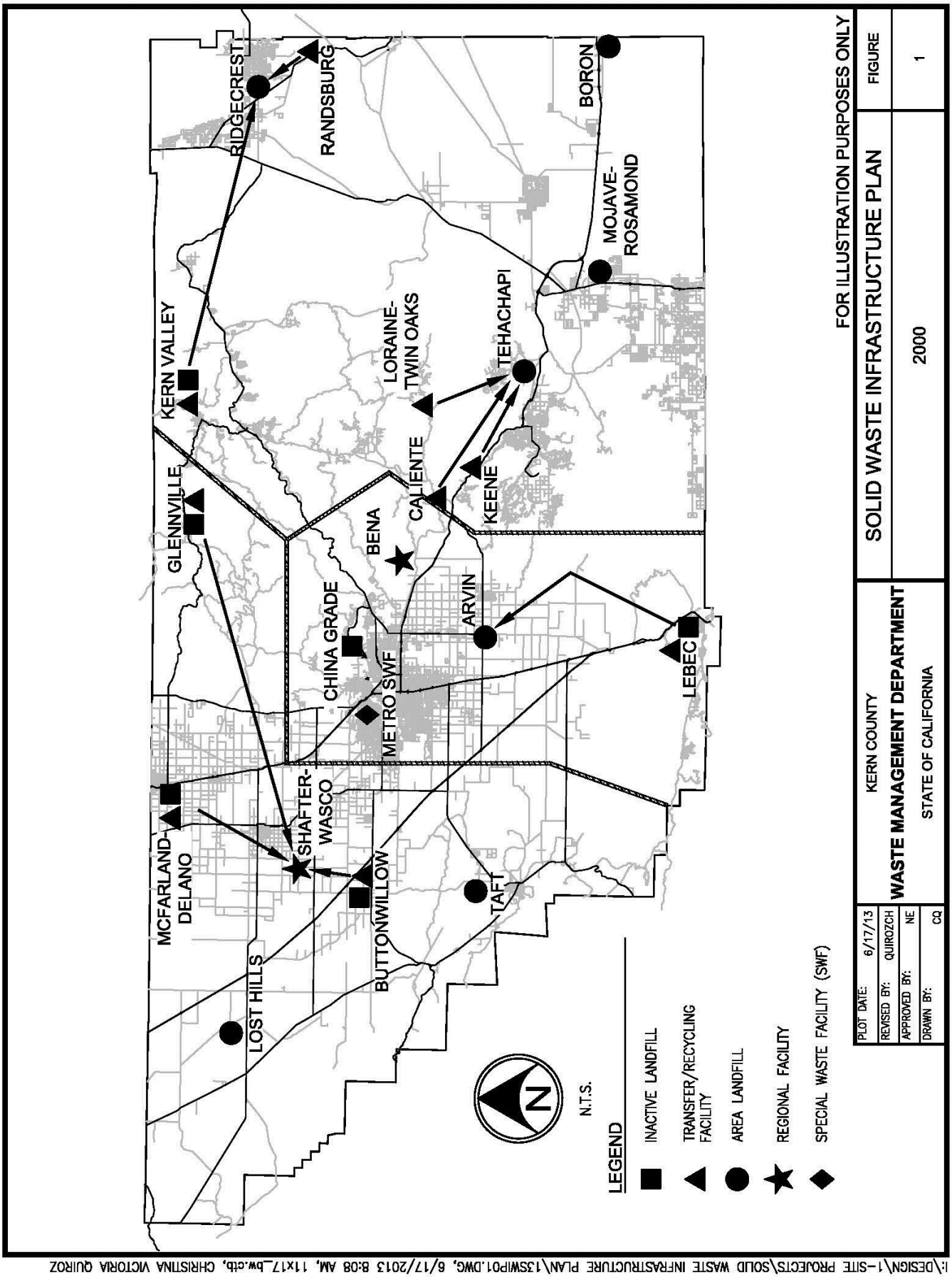
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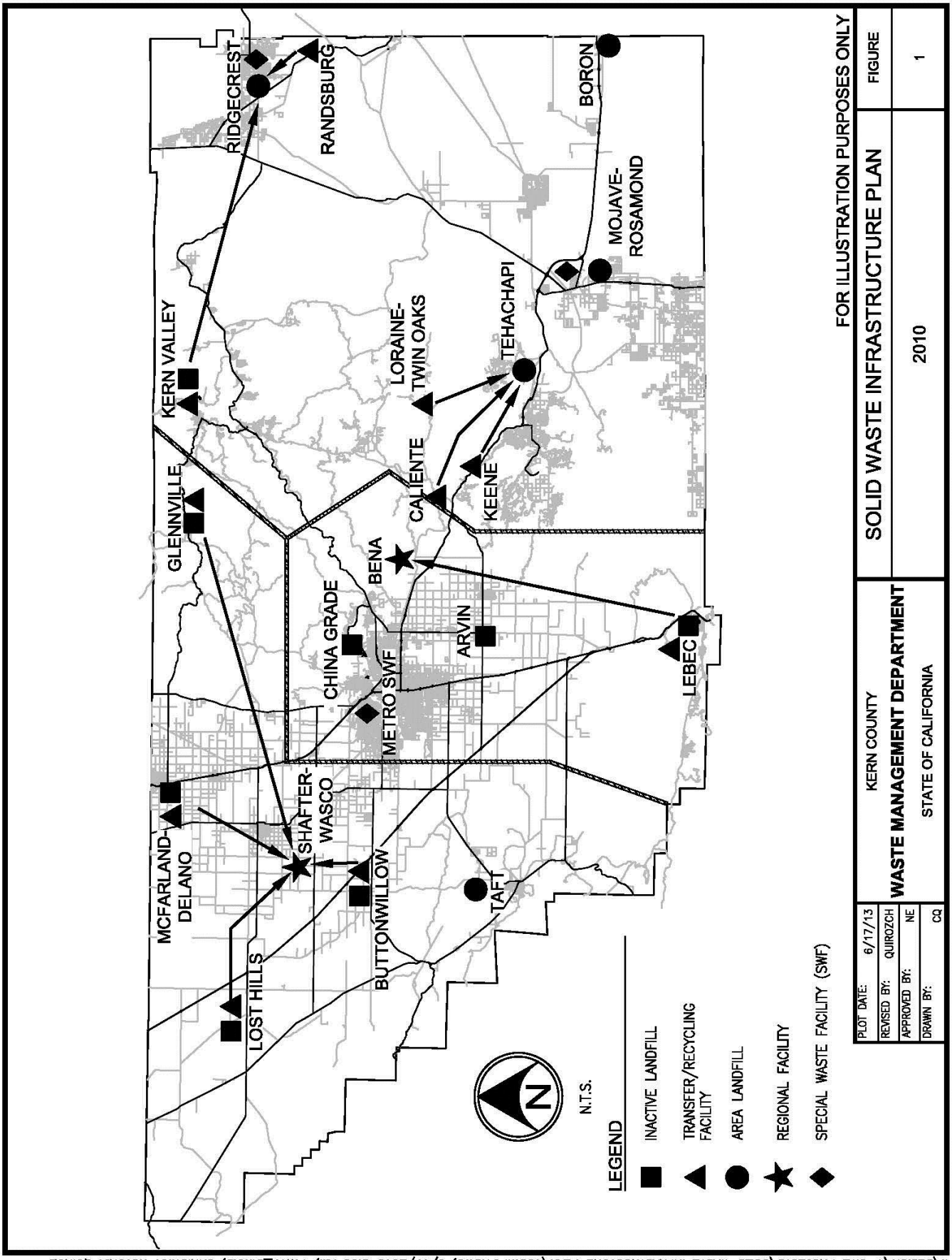
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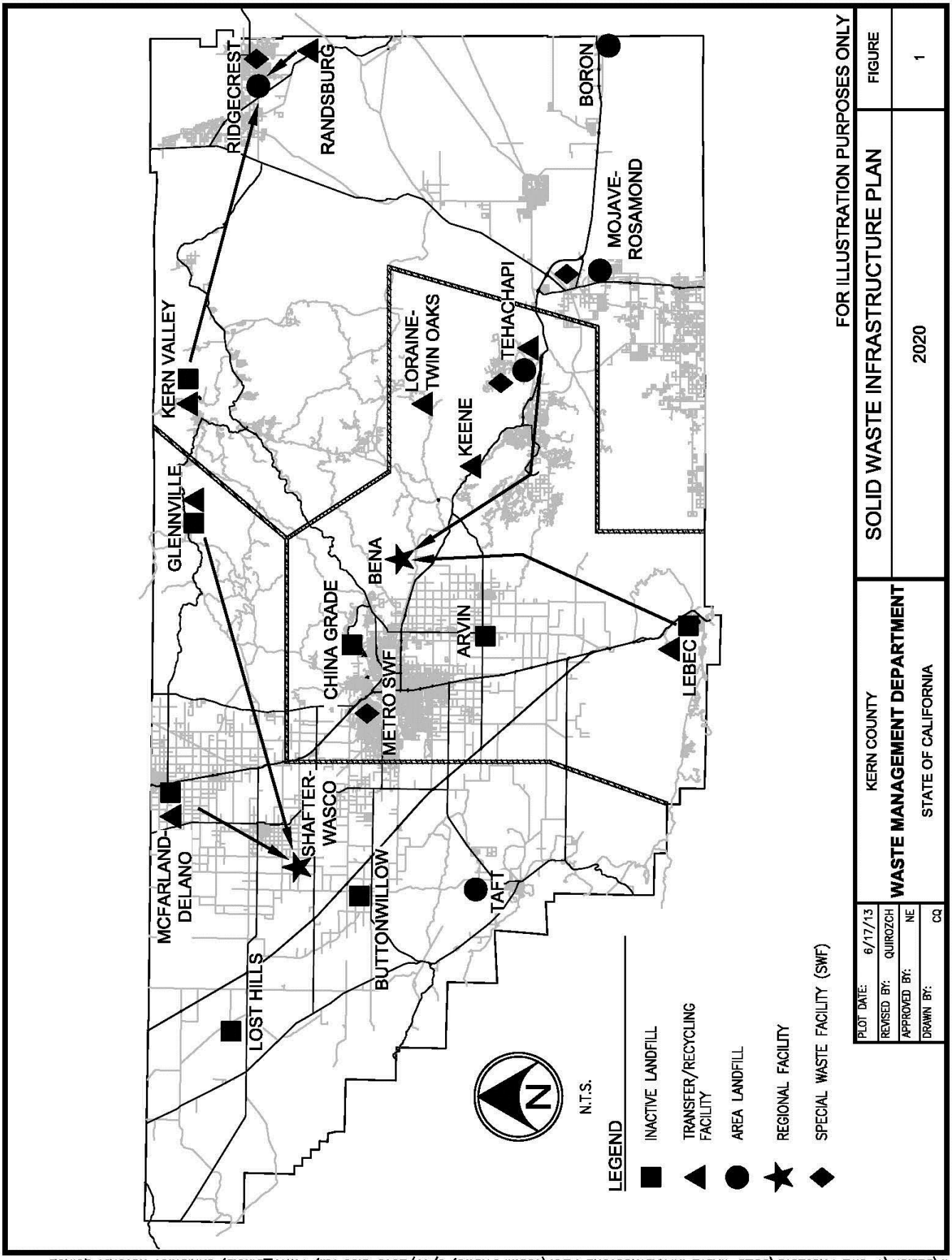
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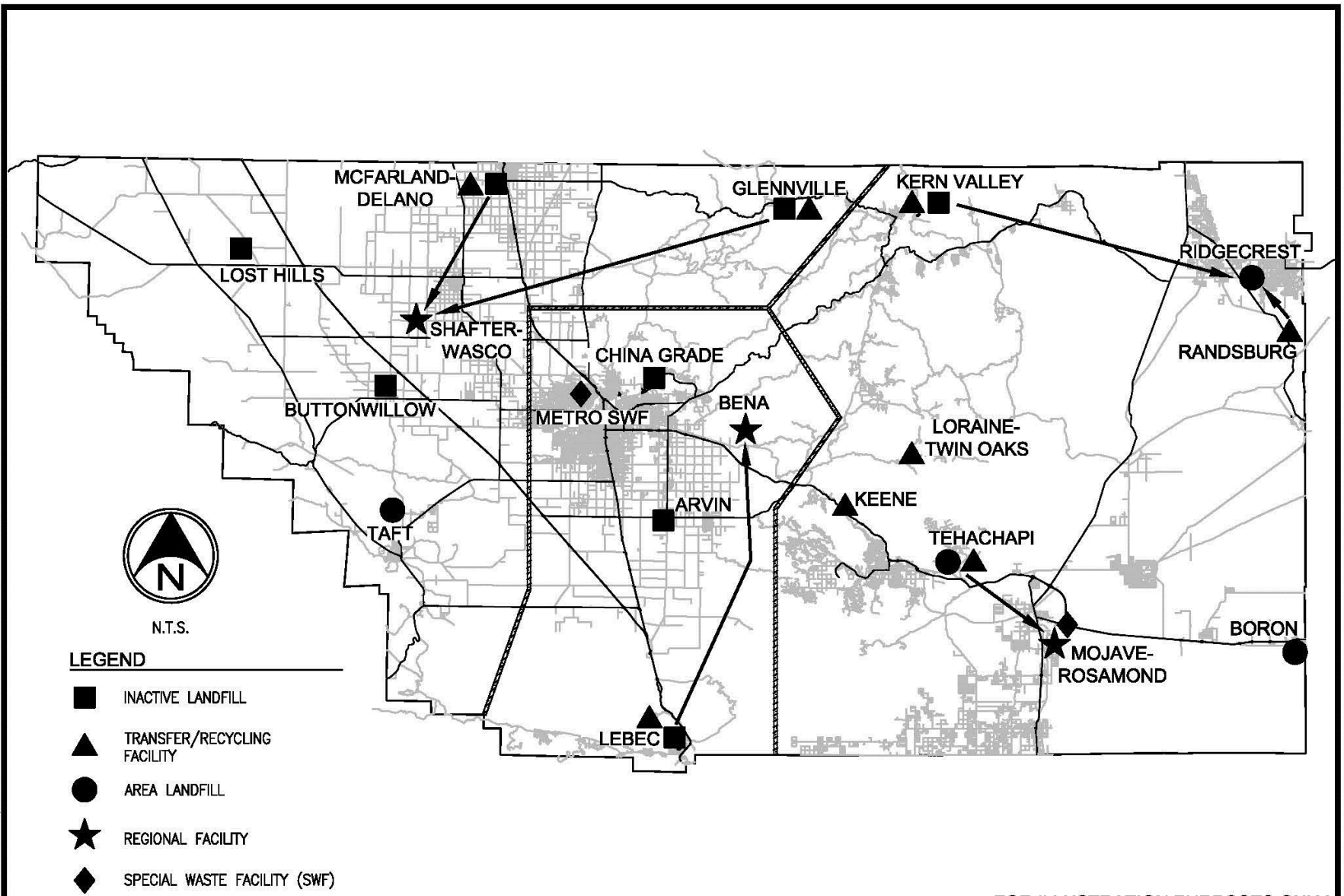

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PLOT DATE: 6/17/13 REVISED BY: QUIROZCH APPROVED BY: NE DRAWN BY: CQ	KERN COUNTY **WASTE MANAGEMENT DEPARTMENT** STATE OF CALIFORNIA	SOLID WASTE INFRASTRUCTURE PLAN 2030	FIGURE 1

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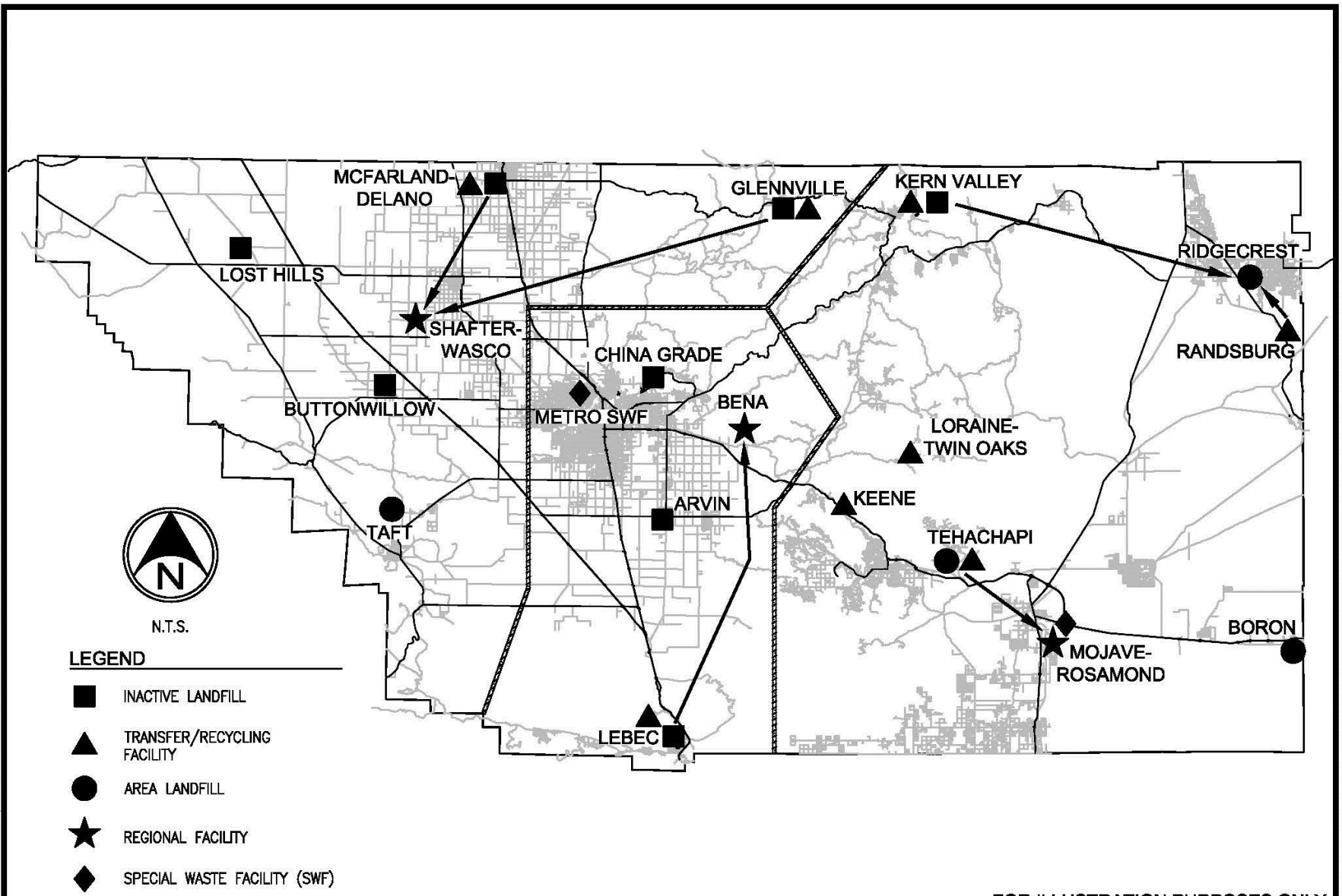

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PLOT DATE: 6/17/13 REVISED BY: QUIROZCH APPROVED BY: NE DRAWN BY: CQ	KERN COUNTY **WASTE MANAGEMENT DEPARTMENT** STATE OF CALIFORNIA	SOLID WASTE INFRASTRUCTURE PLAN 2040	FIGURE 1

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Appendix G

2015 SRRE Revision Process Documentation

SOLID WASTE MANAGEMENT ADVISORY COMMITTEE AND LOCAL TASK FORCE

September 2015

COUNTYWIDE INTEGRATED WASTE MANAGEMENT PLAN TASK FORCE
and
KERN COUNTY SOLID WASTE MANAGEMENT ADVISORY COMMITTEE

MEETING NOTICE

Date: **Friday, October 9, 2015**
Time: **9:00 A.M.**
Place: Kern County Public Services Building
2700 "M" Street, First Floor
Bakersfield, CA 93301

AGENDA

1. *Approve Minutes from February 6, 2015
2. Kern County Public Works Department
3. Kern County Organics Strategy – City of Bakersfield Agreement
4. Update to the Integrated Waste Management Plan*◆
   - Source Reduction and Recycling Element
5. Legislative/Regulatory Report
6. Cities Issues
7. Public Comments
8. Committee Member Comments

◆ Indicates Task Force item * Indicates Attachment/Handout

PLEASE REMEMBER TO TURN OFF ALL CELL PHONES, PAGERS OR ELECTRONIC DEVICES DURING COMMITTEE MEETINGS.

2016 MEETING DATES

February 12, 2016
May 13, 2016
August 12, 2016
November 11, 2016

All Agenda item supporting documentation is available for public review at the Kern County Waste Management Department, 2700 M Street, Suite 500, Bakersfield, CA 93301, 661-862-8900; during regular business hours (8:00 AM–5:00 PM, Monday through Friday), following the posting of the Agenda. Any supporting documentation that relates to an Agenda item for an open session of any regular meeting that is distributed after the Agenda is posted, and prior to the meeting, will also be available for review at that same location.

MEMBERS

ASSOCIATION OF CITIES
Ed Grimes
City of Tehachapi

BAKERSFIELD CITY COUNCIL
Councilman Ken Weir

COUNTY OF KERN
Supervisor Mick Gleason

COUNTY OF KERN
Supervisor Leticia Perez

FRANCHISE HAULERS,
METRO-BAKERSFIELD
Larry Moxley

FRANCHISE HAULERS,
NON-METRO BAKERSFIELD
Bob Hampton

PUBLIC-AT-LARGE,
NON-UNIVERSAL COLLECTION AREA
Michael Geyer (Chairman)

PUBLIC-AT-LARGE,
UNIVERSAL COLLECTION AREA
John Duffy (Vice-Chair)

RECYCLER
(Vacant)

ALTERNATE MEMBERS

ASSOCIATION OF CITIES
(Not Designated)

BAKERSFIELD CITY COUNCIL
Councilman Terry Maxwell

COUNTY OF KERN
Supervisor David Couch

SOLID WASTE MANAGEMENT ADVISORY COMMITTEE AND LOCAL TASK FORCE

MEMBERS

ASSOCIATION OF CITIES
City of Tehachapi
Ed Grimes

BAKERSFIELD CITY COUNCIL
Councilman Ken Weir

COUNTY OF KERN
Supervisor Mick Gleason

COUNTY OF KERN
Supervisor Leticia Perez

FRANCHISE HAULERS,
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Larry Moxley

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BAKERSFIELD CITY COUNCIL
Councilman Terry Maxwell

COUNTY OF KERN
Supervisor David Couch

November 30, 2015

Kern County Board of Supervisors
County Administrative Center
1115 Truxtun Avenue
Bakersfield, CA 93301

Dear Members of the County Board of Supervisors:

Subject: PROPOSED 2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

The Kern County Solid Waste Management Advisory Committee also acting as the County Local Task Force at its regularly scheduled meeting on October 9, 2015, reviewed and considered the proposed 2015 amendment of the Unincorporated Kern County Source Reduction and Recycling Element (SRRE) of the Kern County Integrated Waste Management Plan in compliance with California Code of Regulations (CCR) Title 14, §18765.

The proposed amendment of the SRRE is intended to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The Unincorporated Kern County SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling.

The Kern County Solid Waste Management Advisory Committee also acting as the County Local Task Force concurs with the proposed 2015 amendment to the SRRE and supports the submittal of the proposed revision to the Kern County Board of Supervisors for consideration.

The Kern County Solid Waste Management Advisory Committee also acting as the County Local Task Force hereby submits this comment letter to the Kern County Board of Supervisors and the California Department of Resources Recycling and Recovery (CalRecycle) in accordance with CCR §18768(a)(1).

Sincerely,

Michael Geyer, Chairman
Kern County Solid Waste Management Advisory Committee
Kern County Local Task Force

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cc: County Administrative Office
County Counsel
WMD-SRRE

c/o Kern County Public Works Department
2700 "M" Street, Bakersfield, CA 93301 (661) 862-8900

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KERN COUNTY
PUBLIC WORKS DEPARTMENT
CRAIG M. POPE, P.E., DIRECTOR

2700 "M" STREET, SUITE 450
BAKERSFIELD, CA 93301-2370

ADMINISTRATION & ACCOUNTING
OPERATIONS & MAINTENANCE
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Phone: (661) 862-8900
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CORRECTED PM 12

November 10, 2015

Board of Supervisors
Kern County Administrative Center
1115 Truxtun Avenue
Bakersfield, CA 93301

REQUEST TO SET PUBLIC HEARING FOR CONSIDERATION OF PROPOSED 2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN (ALL S.D.s)
(Fiscal Impact: None)

Pursuant to Public Resources Code (PRC) §41300-41460, the County adopted a Source Reduction and Recycling Element (SRRE) for the Unincorporated County of Kern on October 20, 1992. The 1992 SRRE described and identified programs designed to assure compliance with AB 939 to reduce the disposal of solid waste in the County unincorporated area by 25% and 50% by years 1995 and 2000, respectively.

The Public Works Department (Department) has prepared an amendment of the SRRE to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The Unincorporated Kern County SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes.

California Code of Regulations (CCR), Title 14 §18765 requires that revisions of the SRRE be reviewed and commented upon by the Local Task Force (LTF) prior to consideration by the County. The Kern County LTF, also acting as the Solid Waste Management Advisory Committee (SWMAC), at its regularly scheduled meeting on October 9, 2015, reviewed and considered the proposed amendment of the SRRE. The LTF/SWMAC concurred with the amendment of the SRRE and recommended the Department to submit the proposed amendment to your Board for consideration.

CCR Title 14 §18766 requires the County to conduct a public hearing for the purpose of amending the SRRE. After considering all public comments, the County shall approve the amended SRRE by resolution prior to the submittal of the amended SRRE to the California Department of Resources Recycling and Recovery (CalRecycle) for review and approval.

Therefore, IT IS RECOMMENDED that your Board set a public hearing for Tuesday, December 15, 2015 at 2:00 p.m. to consider the proposed Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment; and direct the Clerk of the Board to publish the Notice of Hearing in the Bakersfield Californian, a newspaper of general circulation, at least 30 days prior to the date set for the public hearing.

Sincerely,

Craig M. Pope
Director

U:\Common\Public Works\Board\2015\11-November\2015-11-10 AGR_ys.doc
Attachment: SRRE Amendment
NOH
cc: County Administrative Office
Jeffrey Marshall, EHSD
WMD SRRE

NOTICE OF PUBLIC HEARING BEFORE THE KERN COUNTY BOARD OF SUPERVISORS FOR CONSIDERATION OF PROPOSED 2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that on December 15, 2015, at the hour of 2:00 p.m, in the Chambers of the Board of Supervisors at the County of Kern Administrative Center, 1115 Truxtun Avenue, First Floor, Bakersfield, California, the Board of Supervisors will consider the following project:

UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT 2015 AMENDMENT

Pursuant to Public Resources Code (PRC) §41300-414160, the County has adopted a Source Reduction and Recycling Element (SRRE) for the Unincorporated County of Kern which has been approved by California's Department of Resources Recycling and Recovery (CalRecycle), formerly known as the California Integrated Waste Management Board. The Public Works Department has prepared an amendment of the SRRE to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The Unincorporated Kern County SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes.

The revision of the SRRE requires review and comment by the Kern County Local Task Force. The Local Task Force, at its regularly scheduled meeting on October 9, 2015, reviewed and concurred with the proposed 2015 amendment of the SRRE.

A revision of the SRRE is subject to environmental review. The Kern County Public Works Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program and, therefore, it is statutorily exempt from further review pursuant to Public Resources Code Section 21080(b)(15).

Copies of the proposed Unincorporated Kern County SRRE 2015 Amendment are available for inspection by interested persons during normal business hours at the Kern County Public Works Department, located at 2700 "M" Street, Suite 500, Bakersfield, California or available on our website at www.kerncountywaste.com/newsroom. Persons seeking additional information regarding this SRRE amendment should contact Aurora Rush at (661) 862-8980.

Anyone wishing to present evidence or be heard regarding this matter may appear at the hearing of the matter or any continuation thereof. If you challenge the action taken on this matter in court, you may be limited to raising only issues you or someone else raised at the public hearing described in this Notice, or in written correspondence delivered to the Board of Supervisors at, or prior to, the public hearing.

Dated: _____

KATHLEEN KRAUSE
Clerk of the Board of Supervisors
County of Kern, State of California

_____
Deputy

I:\CLERICAL\NOTICES\Hearing\15_SRRE NOH.docx

KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

Source Reduction and Recycling Element

Unincorporated Kern County
2015 Amendment

Prepared by:
Kern County Public Works Department
2700 "M" Street, Suite 450
Bakersfield, CA 93301

November 2015

Printed on Recycled Paper

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Appendix A - Public Resources Code (PRC), §41300-41460

Appendix B - California Code of Regulation (CCR), Title 14, Division 7, Chapter 9, Articles 6.1 and 6.2, §18722 through 18748

Appendix C

- Waste Diversion Plan: Implementing a County-Wide Strategy
- 1999 Solid Waste Diversion Status Report
- 2000 Solid Waste Diversion Status Report
- 2001 Solid Waste Diversion Status Report
- 2002 Solid Waste Diversion Status Report
- 2004 Solid Waste Diversion Status Report
- 2006 Solid Waste Diversion Status Report

Appendix D - Recycling and Solid Waste Planning Progress Report (HF&H)

Appendix E - 2015 Kern County Organic Diversion Strategy

Appendix F – 2013 Infrastructure Plan

Appendix G – 2015 SRRE revision process documentation, to be included prior to CalRecycle submission

Appendix H – Site-Specific data on waste stream/CA composite data

Appendix I – Mandatory Commercial Recycling Program Summary

Appendix J

- Mandatory Commercial Organics Recycling Program Summary
- 2015 Compostable Organic Program

KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

SOURCE REDUCTION AND RECYCLING ELEMENT UNINCORPORATED KERN COUNTY 2015 AMENDMENT

1 EXECUTIVE SUMMARY

1.1 Introduction

The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management concerning both objectives and planning responsibilities for local jurisdictions and the State of California. AB 939 required cities and counties to reduce solid waste disposal 25 percent by January 1, 1995 and 50 percent by January 1, 2000. The law and subsequent legislations also established a hierarchy with which the local jurisdictions must comply to address waste management issues. This planning hierarchy included, in order of priority, source reduction and material reuse, recycling and composting, solid waste disposal including landfill disposal, transformation, and engineered municipal solid waste (EMSW) conversion.

To carry out waste management according to this hierarchy, California Public Resources Code (PRC) required each local jurisdiction to prepare and implement the following solid waste elements:

- Source Reduction and Recycling Element (SRRE)
- Household Hazardous Waste Element (HHWE)
- Non-disposal Facility Element (NDFE)

In addition, PRC required each county to prepare a Countywide Integrated Waste Management Plan (CIWMP) consisting of all the SRREs, HHWEs and NDFEs of jurisdictions within the county; a Countywide Siting Element (CSE); and a Countywide Integrated Waste Management Summary Plan (Summary Plan).

The basic statutory requirements for the content and format of the SRRE are found in Public Resources Code (PRC), §41300-41460 (Appendix A). PRC §41780-41794 contain the requirements and procedures for preparation and submittal of the SRRE to CalRecycle. These requirements are further clarified in regulations adopted by the California Department of Resources Recycling and Recovery (CalRecycle), formerly known as the California Integrated Waste Management Board, and approved by the Office of Administrative Law for the preparation of an SRRE (California Code of Regulation (CCR), Title 14, Division 7, Chapter 9, Articles 6.1 and 6.2, §18722 through 18748) (Appendix B). CCR Title 14, Division 7, Chapter 9, Article 7.0, §18760 through 18775.4 contain additional regulations governing the procedures for preparing and revising SRREs.

Statutes and regulations are very specific about the contents of the SRRE. The element must contain a Waste Generation Study (WGS) that estimates the composition and quantity of solid waste disposed and solid waste diverted from disposal within the

jurisdiction. The SRRE must include goals and objectives for the short-term (1991-1995) and medium-term (1996-2000) planning periods.

PRC §41303(a through h) requires that the element contain at least the following components (see Appendix A for the text of the statutes):

- Waste Characterization: estimating the composition and quantity of solid waste disposed and solid waste diverted, and the diversion rate within the jurisdiction;
- Source Reduction: identifying local programs that will reduce the quantity of waste generated;
- Recycling: identifying measures that will increase the diversion rate through recycling activities;
- Composting: identifying programs that will increase the diversion rate through composting activities;
- Special Waste: addressing such wastes as ash, asbestos, and sludge (or other "special" wastes of local concern, such as construction and demolition waste);
- Solid Waste Facility Capacity: identifying the impact of the increased diversion rate on the amount of landfill capacity needed by the jurisdiction to meet the needs of the community for fifteen years;
- Education and Public Information: describing the educational and informational efforts to enhance the programs;
- Funding: identifying the anticipated implementation costs and sources of funding; and
- Integration (required by CCR §18748): demonstrating how program implementation will result in attainment of the 25 percent diversion target by 1995 and establishing the planned direction for reaching 50 percent diversion by the year 2000.

The Kern County Public Works Department (KCPWD) is charged by the Board of Supervisors with the responsibility to plan and implement waste management activities and programs in the County unincorporated area to assure compliance with AB 939 and subsequent state mandates.

The Unincorporated Kern County Source Reduction and Recycling Element (SRRE) 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintained the mandatory waste diversion goals established by AB 939. The SRRE 2015 Amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes. Appendices may be updated from time to time to reflect current conditions.

1.2 Unincorporated Kern County Source Reduction and Recycling Element Summary

1.2.1 Waste Characterization Component

KCPWD conducted the original waste characterization study in 1990. At that time, the unincorporated portions of the County generated almost 600,000 tons of solid waste. Use of existing diversion programs operated by the County and the private sector facilitated diversion of almost 120,000 tons, or approximately 20 percent.

In 2008, CalRecycle commissioned a study on the types and amounts of materials disposed at solid waste facilities throughout the state. This study estimated quantity and composition of the commercial, residential, and self-hauled waste streams in California and aggregated the data to estimate the overall composition. Kern County Public Works Department participated in the 2008 CalRecycle Waste Characterization study with site-specific analysis at the Shafter-Wasco Landfill and the Taft Landfill. CalRecycle is currently developing a 2014 Statewide Waste Characterization Update.

In 2009, the Kern County Board of Supervisors approved the KCPWD to develop a Recycling and Solid Waste System Plan (System Plan) that would guide KCPWD's efforts until 2020. KCPWD, working with HF&H Consultants, conducted site specific Waste Characterization Analysis at four Kern County solid waste facilities.

1.2.2 Source Reduction Component

Effective source reduction is an important part of an integrated waste management program. Usually placed as top priority of such a program, it is a preventive approach aimed at avoiding the creation of waste through changes in the design, manufacture, purchase, procurement, and use of products of packaging. Source reduction includes activities that promote increased longevity through reuse, repair, and remanufacture. In 1990, the diversion attributed to source reduction activities was estimated at approximately 1.5 percent.

The 1994 SRRE examined and evaluated four broad categories of source reduction activities. These included:

1) Rate Structure Modifications;
2) Economic Incentives;
3) Technical Assistance and Promotion; and
4) Regulatory Programs.

The Source Reduction Component (Section 3.0) described the specific alternatives selected for implementation. The County continues to promote source reduction activities through public education and outreach. Quantification of source reduction efforts on a countywide basis is not monitored or tracked.

1.2.3 Recycling Component

Recycling is an ongoing activity in Kern County. In 1990, the diversion from recycling was approximately 5 percent. Solid Waste Diversion has increased to 64.4 percent, as reported in the 2014 Electronic Annual Report. AB 341, passed in 2011, required that Mandatory Commercial Recycling (MCR) and Mandatory Multi-Family Residential Recycling be implemented by July 1, 2012. In response to AB 341, the County

approved an MCR ordinance in 2012 to encourage compliance and facilitate monitoring of MCR. The County also approved implementation of mandatory residential curbside recycling in the Metro Bakersfield area and implementation of voluntary residential curbside recycling in the remainder of the unincorporated County. In anticipation of the passage of AB 341, several additional source separated recycling/processing facilities were developed or expanded. In the metropolitan Bakersfield area, MRC, Inc., BARC, and RockTenn, Inc., all provide source separated recycling and processing services. American Refuse, operating the Carousel Recycling facility in Wasco, provides source-separated service to northwest Kern County. Tehachapi Recycling Inc. currently provides mixed waste processing in the east Kern unincorporated area.

Currently, convenient solid waste collection services, including recycling and green waste collection and processing, have expanded throughout the County. As of July 2014, mandatory or voluntary curbside recycling is available to 98% of the countywide population. Similarly, mandatory or voluntary curbside green waste collection is available to 72% of the countywide residential population.

1.2.4 Composting Component

Composting is an environmentally sensitive and resourceful means of diverting organic waste from the waste stream. In 1990, no known composting operations or facilities could be credited towards diversion of the municipal waste stream from the unincorporated areas. Currently, the San Joaquin Valley portion of Kern County has the following permitted private composting facilities:

- Blossom Valley Organics South near Arvin,
- Synagro South Kern Compost Facility near Mettler, and
- Liberty Composting near Lost Hills.

Blossom Valley Organics South accepts produce waste from large commercial grocers throughout the state. Synagro and Liberty Composting are both biosolids composting facilities which primarily accept green waste from southern California. Synagro has a Conditional Use Permit requirement to retain 10 percent of their permitted capacity to accept green waste or wood waste from Kern County jurisdictions.

Green waste from the Shafter-Wasco Landfill was initially transferred to Liberty Composting at a charge. The Department currently utilizes the Synagro Facility at no charge. Recently, the Department has implemented green waste screening and processing at the Shafter-Wasco RSLF to meet the more stringent acceptance criteria of the Synagro Compost Facility. It should be noted that, typically, the private facilities do not accept self-haul organic waste nor do they accept non-screened or processed green waste collected straight from the curb.

In August 2013, the Board of Supervisors adopted the 2013 Kern County Solid Waste Infrastructure Plan which identified and designated the necessary facilities to provide the organic diversion programs. As indicated in the Infrastructure Plan, the Mt. Vernon Green Waste Facility is currently providing excellent service to Metro Bakersfield. The Shafter-Wasco RSLF and Bena RSLF have the ability to expand organic processing and service the valley communities, and the Mojave-Rosamond RSLF is ideally suited to provide similar services to the desert region.

1.2.5 Special Waste Component

Special waste is solid waste that, because of its source generation, physical, chemical, or biological characteristics, or unique disposal practices, requires special handling. Such waste includes tires, construction and demolition debris, white goods, auto bodies, and potentially hazardous waste such as sewage sludge, pesticide containers, asbestos, ash, medical wastes, and auto shredder waste.

1.2.6 Solid Waste Facility Capacity Component

Kern County recognizes that solid waste facility siting, operations, and closure, are significant commitments of County resources. In 1995, the County developed a Solid Waste Infrastructure Plan in which regulatory trends from the previous 30 years were evaluated and related to the County's experience in owning and operating landfills. The purpose of the Infrastructure Plan is to thoughtfully develop a comprehensive facility plan to handle the current and future solid waste needs of Kern County while attempting to anticipate and minimize future liabilities. The County concluded that the economies of scale resulting from fewer, but larger, disposal sites would result in more cost effective disposal operations and limit future liability.

The *Solid Waste Infrastructure Plan* (1995 Infrastructure Plan) was first adopted by the Board of Supervisors on August 1, 1995, and provided a blueprint for the Countywide Siting Element. The *2005 Solid Waste Infrastructure Plan* (2005 Infrastructure Plan) updated the 1995 Infrastructure Plan. The *2013 Kern County Solid Waste Infrastructure Plan* (2013 Infrastructure Plan) again updated assumptions as well as the objectives of the 2005 Infrastructure Plan, provided a status update for each objective, outlined emerging issues and system impacts, and updated the implementation schedule. Each subsequent updated Solid Waste Infrastructure Plan was reviewed and commented on by the Kern County Solid Waste Management Advisory Committee and the Local Task Force and approved by the Kern County Board of Supervisors.

In 2014, the County revised the Countywide Siting Element to reflect the 2013 Infrastructure Plan as well as provide for identification of Engineered Municipal Solid Waste (EMSW) conversion facilities.

Kern County has more than the required 15 years of capacity. Table D-1 demonstrates the remaining municipal solid waste disposal capacity of County owned public landfills. The KCPWD did not factor private or U.S. Government-owned facilities in to the countywide municipal solid waste disposal capacity due to limitations on use by the public and lack of contractual obligation. Table D-2 demonstrates the countywide municipal solid waste disposal projection for a 15-year period.

The information in tables D-1 and D-2 is based on the 2015 Capacity Study. The Capacity Study is updated annually by the KCPWD, and therefore these tables may be updated to provide more current remaining permitted capacities and/or as facilities close.

1.2.7 Education and Public Information Component

Education and public information are essential to the success of any waste diversion effort. This component presents a discussion of education and public information programs targeting source reduction, recycling, composting, special waste, and

household hazardous waste. Currently, the KCPWD conducts an extensive education and information program.

1.2.8 Funding Component

In the state of California, the responsibility for providing adequate solid waste disposal capacity and services is assigned by the State to the County, while the responsibility for implementing recycling programs and achieving diversion mandates is assigned to individual jurisdictions. In most jurisdictions, public and private solid waste facilities charge a gate fee to cover the cost of facility operations for landfills, transfer stations, composting facilities, and recycling facilities. Residential and commercial customers pay the gate fee either through their collection/hauling services or directly at the gate of the facility. In the early 1990s, concerns over the increased cost of recycling and waste management services and the potential unintended consequence of illegal dumping, prompted the Board of Supervisors to adopt a system by which residential parcels paid a Land Use Fee (LUF) collected on the tax roll, and commercial customers paid a Gate Fee (GF). The system incentivized businesses to recycle and discouraged illegal dumping by residents. The LUF/GF system was implemented countywide and created the Solid Waste Enterprise Fund. For the last 25 years, the Solid Waste Enterprise Fund has provided stable funding for the construction, operation and eventual closure of the landfills, transfer stations, and special waste facilities countywide, as well as the remediation and maintenance of the legacy burn dumps.

1.2.9 Integration Component

The Integration Component is a summary of the solid waste management techniques and programs proposed by the individual components of the SRRE. It explains how programs will work together to jointly achieve source reduction, recycling, composting, and special waste diversion goals for the short and medium term planning periods. If the County cannot divert the waste, the County will ensure disposal in an appropriately permitted waste disposal facility in the region. In 1990, the diversion rate in the unincorporated areas of the County was 19.9 percent. The diversion rate increased to 49.3 percent by 1995 and to 52 percent by 2000. This satisfied the state mandated goals for solid waste diversion as set by AB 939. The diversion rate has remained above 50 percent for the last 14 years. The County unincorporated area has achieved 64.4% Solid Waste Diversion as reported in the 2014 Electronic Annual Report.

2 BACKGROUND

2.1 AB 939 Source Reduction and Recycling Element

The original approval of the SRRE involved a review of the draft with a later review of the final SRRE. In October 1991, the county's Local Task Force (LTF), the California Integrated Waste Management Board (CIWMB), and the incorporated cities in the county received the draft. Kern County held a public hearing on the draft SRRE in January 1992. The county received comments during the review period for the draft documents. The Kern County Board of Supervisors approved the SRRE on October 22, 1992.

In 1994, Kern County revised the SRRE to:

- Reflect changes to the 1990 (base year) disposal amount resulting from the 1993 California State Audit; and
- Reflect changes to the 1990 (base year) diversion amount resulting from the documentation and diversion of 19,500 tons of inert solids.

2.2 Waste Diversion Strategy Documents

Since October 1992, the Department has consistently developed strategy/policy documents addressing solid waste diversion. These documents were presented to the LTF and approved by the Board of Supervisors. The original 1992 Waste Diversion Plan was adopted into the 1994 SRRE.

- Waste Diversion Plan: Implementing a County-Wide Strategy, 12/15/1992 (Appendix C).
- 1999 Solid Waste Diversion Status Report, 4/20/1999
- 2000 Solid Waste Diversion Status Report, 5/30/2000
- 2001 Solid Waste Diversion Status Report, 9/25/2001
- 2002 Solid Waste Diversion Status Report, 10/1/2002
- 2004 Solid Waste Diversion Status Report, 12/14/2004
- 2006 Solid Waste Diversion Status Report, 10/17/2006
- Recycling and Solid Waste Planning Progress Report (HF&H), 10/6/2009 (Appendix D)
- 2015 Kern County Organic Diversion Strategy, March 24, 2015 (Appendix E)

2.3 County Solid Waste Infrastructure Plans and Countywide Siting Element

The Department also developed strategy/policy documents addressing solid waste infrastructure. These documents were also presented to the LTF and approved by the Board of Supervisors. The Infrastructure Plans have been adopted into the Countywide Siting Element (1996) and its subsequent amendments.

- 1995 Kern County Solid Waste Infrastructure Plan, August 1, 1995
- 2005 Solid Waste Infrastructure Plan, January 11, 2005
- 2013 Kern County Solid Waste Infrastructure Plan, August 6, 2013 (Appendix F)

The most recent 2013 Infrastructure Plan evaluated diversion, composting, household hazardous waste, as well as disposal infrastructure including engineered municipal solid waste conversion facilities, and was adopted into the Countywide Siting Element (2014).

2.4 Mandatory Commercial Recycling (MCR)

With the passage of AB 341 (Chesbro, Chapter 476, Statutes of 2011), the Governor and the Legislature established a policy goal for the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. CalRecycle released the *AB 341 Report to the Legislature* in August 2015.

CCR, §41780.01(b) states that CalRecycle shall not "establish or enforce" a diversion rate on a jurisdiction that is greater than the 50 percent mandated by AB 939. However, with the passage of AB 341, the State has passed legislation requiring commercial businesses to recycle as of July 1, 2012. "Business" means any commercial or public

entity that generates four or more cubic yards of commercial solid waste per week, including but not limited to, a firm, partnership, proprietorship, joint-stock company, corporation, or association that is organized as a for-profit or non-profit entity, strip mall (e.g. property complex containing two or more commercial entities), industrial facility, school, school district, California State University, community colleges, University of California, special district or a federal, state, local, regional agency or facility. "Business" also includes a multi-family residential dwelling of five units or more regardless of the amount of commercial solid waste generated.

In response to AB 341, the County approved an MCR ordinance in 2012 to encourage compliance and facilitate monitoring of MCR. The County also approved implementation of mandatory residential curbside recycling in the Metro Bakersfield area and implementation of voluntary residential curbside recycling in the remainder of the unincorporated County. In anticipation of the passage of AB 341, several additional source separated recycling/processing facilities were developed or expanded. In the metropolitan Bakersfield area, MRC, Inc., BARC, and RockTenn, Inc., all provide source separated recycling and processing services. American Refuse, operating the Carousel Recycling facility in Wasco, provides source-separated service to northwest Kern County. Tehachapi Recycling Inc. currently provides mixed waste processing in the east Kern unincorporated area.

2.5 Mandatory Commercial Organic Recycling (MCOR)

Subsequently, on September 28, 2014, AB 1826, Mandatory Commercial Organic Recycling and AB 1594, Green Waste Alternate Daily Cover (ADC) were passed. AB 1826, Mandatory Commercial Organic Recycling, requires businesses to recycle/compost organic waste. The legislation employs staged implementation beginning April 1, 2016 and culminating January 1, 2019. AB 1826 initially targets businesses that generate 8 cy/week of compostable organic waste and expands to include businesses that generate 4 cy/week of cumulative solid waste.

AB 1594 defines that green waste used as alternate daily cover (ADC) at landfills does not constitute diversion through recycling and will be considered disposal as of January 1, 2020. While AB 1594 will not significantly impact Kern County, it will significantly impact landfills in southern California, where the practice is fairly common.

2.6 Source Reduction and Recycling Element 2015 Amendment

The Unincorporated Kern County Source Reduction and Recycling Element (SRRE) 2015 Amendment describes the programs, activities and efforts that have successfully achieved the mandatory recycling goals established by AB 939. The SRRE 2015 Amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling.

Documentation of local government approval includes, but is not limited to, LTF comments and Kern County Board of Supervisors hearing notice and approval resolution. Appendix G will contain all documentation related to the 2015 SRRE revision process prior to the submittal of the SRRE to CalRecycle for approval.

3 WASTE CHARACTERIZATION COMPONENT

PRC §41332: For any revision of an SRRE, the county waste characterization component shall identify the constituent materials that comprise the solid waste disposed of within the unincorporated area of the county. Information shall be statistically representative and shall reflect seasonal variations. Constituent materials shall be identified by 1) volume, 2) percentage in weight or volumetric equivalent, 3) material type, and 4) source of generation (residential, commercial, industrial, governmental, or other sources.

PRC §41333: Any waste characterization component shall include data on the quantities of solid waste generated, diverted, and disposed of to enable the Board to accurately measure the diversion.

CCR §18732: Jurisdiction shall prepare a solid waste generation analysis that includes, but is not limited to, the following:

(a) This subsection only applies to the initial SRRE;

(b) A list of the waste materials currently disposed in the jurisdiction which could potentially be diverted from disposal by use of the diversion programs described in subsequent sections; and

(c) A list of the waste materials currently disposed in the jurisdiction which cannot be diverted from disposal by use of the diversion programs described in subsequent sections and a discussion of why not.

3.1 Introduction

In accordance with Assembly Bill 939 (AB 939), the Integrated Waste Management Act of 1989, and later amendments, KCPWD prepared the required Solid Waste Generation Study and Analysis in 1991. The objective of the Solid Waste Generation Study (SWGS) was to identify amounts of materials that were (in 1990) being disposed and diverted. AB 939 required diversion of 25 percent by 1995 and 50 percent by the year 2000 for all municipal solid waste generated within a jurisdiction. The initial Source Reduction and Recycling Element, based on that SWGS, described programs designed to meet those diversion goals during the short-term (1991-1995) and medium-term (1996-2000) planning periods. Unincorporated Kern County has achieved and exceeded these mandates.

In 2008, CalRecycle commissioned a study on the types and amounts of materials disposed at solid waste facilities throughout the state. This study estimated quantity and composition of the commercial, residential, and self-hauled waste streams in California and aggregated the data to estimate the overall composition. Kern County Public Works Department participated in the 2008 CalRecycle Waste Characterization study with site-specific analysis at the Shafter-Wasco Landfill and the Taft Landfill. CalRecycle is currently developing a 2014 Statewide Waste Characterization Update.

In 2008, the Kern County Board of Supervisors approved the KCPWD to develop a Recycling and Solid Waste System Plan (System Plan) that would guide KCPWD's efforts until 2020. KCPWD, working with HF&H Consultants, conducted site-specific Waste Characterization Analysis at the four Kern County solid waste facilities.

3.2 1990 Waste Characterization Study

Unincorporated Kern County generated 547,883 tons of solid waste in 1990. The County disposed of 511,766 tons and diverted 36,117 tons. The base year 1990 established the baseline diversion rate of 6.59%. Inert solids and yard waste were the leading components of the material disposed (26% of total waste stream and 20% of total waste stream, respectively). Aluminum cans had the highest diversion rate at 54.7%.

In 2015, the 1990 Waste Characterization Study is obsolete and, therefore, is only referenced for historical purposes.

3.3 Statewide Waste Characterization Studies

CalRecycle contracted with RW Beck and Cascadia Consulting Group to conduct a Targeted Statewide Waste Characterization Study. *The California 2008 Statewide Waste Characterization Study* included site-specific data from Kern County disposal facilities, specifically the Shafter-Wasco Sanitary Landfill and the Taft Sanitary Landfill. The County continues to utilize this comprehensive report and looks forward to the release of the 2014 Waste Characterization Study. The *California 2008 Statewide Waste Characterization Study* and other Targeted Statewide Waste Characterization Studies are available at:

http://www.calrecycle.ca.gov/wastechar/wastestudies.htm#Overview

In general terms, the two most prevalent general waste categories in California's overall disposed waste stream in 2008 were organics (32.4%) and inert solids (29.1%). The two most prevalent material types in those categories were food and lumber, with 15.5% and 14.5%, respectively, of the waste stream.

http://www.calrecycle.ca.gov/lgcentral/GoalMeasure/DisposalRate/Graphs/EstDiversion.htm

3.4 2009 Kern County Waste Characterization Study

In 2008, the Kern County Board of Supervisors approved the KCPWD develop a Recycling and Solid Waste System Plan (System Plan) that would guide KCPWD's efforts until 2020. KCPWD, working with HF&H Consultants, conducted site specific Waste Characterization Analysis at the four Kern County solid waste facilities.

Waste characterization studies are routinely performed as a part of integrated waste management planning. These studies are intended to analyze the materials being sent for disposal to determine what types and relative quantities of each material type remains in the waste stream. This specific waste characterization study performed under the supervision of HF&H was designed to look at four specific parts of the County that utilize different diversion programs. This targeted approach was selected in order to identify where opportunities exist for additional diversion given existing programs. Specifically, waste characterization data was collected to understand the disposed stream after the effects of: the City of Delano's "Universal Blue-Cart" program; the metro-Bakersfield area's "Voluntary Blue-Cart" program, the City of Tehachapi's "MRF First" program; and, the City of Ridgecrest's "CRV Drop-Off" program.

Key Overall Waste Characterization Results below presents the aggregated results of the waste characterization study for the three largest constituent material types of the waste stream at each sampling location and compares them to the results of the 2004 statewide waste characterization study performed by CalRecycle.

Table 3-4
Key Overall Waste Characterization Results (2009)

Material	Bena	Delano	Tehachapi	Ridgecrest	Kern Co.	Statewide
Traditional Recycling Materials*	45%	**38%**	46%	45%	43%	41%
Compostable Organics**	**19%**	34%	38%	22%	24%	26%
Construction & Demolition	19%	18%	**11%**	19%	18%	22%

*Paper, cardboard, plastic, glass and metal
**Leaves, grass, brush, and food

The HF&H study methodology, including randomization procedures, generator types, sample sizes, material types, and sorting process were established to be consistent with the methodology used by CalRecycle during the conduct of their periodic statewide waste characterization studies. The primary difference from the CalRecycle methodology was that the limited study performed as part of this planning process was not designed to gather sufficient samples to be statistically significant in its findings. The material types remaining in Kern County's overall waste stream, as indicated by this study, are very close to the state averages in each of the ten material types studied. Where differences exist, they are logically explained by differences in programs or other factors unique to the County. This similarity tends to reinforce the validity of the study's design, methodology, and results. Site-specific data along with Kern County and California composite data is attached as Appendix H.

3.5 Disposal Projections 2014-2029

Disposal projections are updated on both a site specific and system-wide basis by the Public Works Department as part of the Annual Capacity Study, and were included in the 2014 Countywide Siting Element.

3.6 Conclusions

The KCPWD recognizes that waste facility siting, operations, and closure, are significant commitments of County resources. The Department is also committed to constantly improving the way in which we manage the County's waste stream. Therefore, regulatory trends are evaluated and related to industry trends and the County's experience in owning and operating facilities. Over the last 25 years, the recycling, composting and disposal infrastructure have become truly integrated, and are poised to expand and evolve to include anaerobic digestion and advanced/conversion technology. Existing public and private solid waste infrastructure provides adequate recycling and composting capacity. The Kern County solid waste infrastructure provides adequate Household Hazardous Waste (HHW) services and is capable of being expanded to meet public demand. Finally, the Kern County solid waste infrastructure provides adequate disposal capacity and is capable of meeting the projected integrated waste management needs of the County through 2040 and beyond.

CCR, §41780.01(a), states that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by January 1, 2020. CCR, §41780.01(b) states that CalRecycle shall not "establish or enforce" a diversion rate on a jurisdiction that is greater than the 50 percent mandated by AB 939.

4 SOURCE REDUCTION COMPONENT

PRC §41350 requires this component to include a program and implementation schedule which shows the methods by which the county will, in combination with the recycling and composting components, reduce a sufficient amount of solid waste disposed of within the unincorporated area of the county to comply with the diversion requirements of §41780 (25% by 1995 and 50% by 2000).

4.1 Introduction

The hierarchy established pursuant to AB 939 considered source reduction to be a top priority. Source reduction refers to efforts to reduce the generation of waste at the source and to reduce the possibilities of waste being generated in order to mitigate solid waste disposal problems.

A variety of methods can achieve source reduction by: reducing the amount and types of resources used in products; increasing their durability; reusing, recycling, and repairing them; and decreasing consumption. Three common policy tools promote source reduction:

- Education, public information, and technical assistance
- Regulation
- Economic incentives and/or disincentives

In 1994, when the initial SRRE was written, the approach of Kern County was an integrated package of programs developed to include each of the above aspects.

4.2 Goals and Objectives

The initial SRRE identified specific objectives to be accomplished during the short-term and medium-term planning periods. The County unincorporated area has achieved 64.4% Solid Waste Diversion as reported in the 2014 Electronic Annual Report.

4.3 Existing Programs

Source reduction programs currently being implemented using extensive educational and public information include, but are not limited to, the following:

- Government waste reduction (1990)
- Material exchange, thrift stores (1990)
- Business waste reduction (1992)
- Residential Land Use Fee/Commercial Gate Fee (1993)
- Xeriscaping/grasscycling (implemented in 1993)
- On-site composting/mulching (implemented in 1995)

4.4 Waste Types Targeted for Reduction

Waste types targeted include landscape material, paper, and general consumer goods (clothing, furniture, books etc.)

4.5 Source Reduction Alternatives

Further Source Reduction Alternatives are not being considered at this time as the Kern County unincorporated area is currently in compliance with diversion goals and disposal is less than the corresponding ceiling for Per Capita Disposal.

4.6 Evaluation of Alternatives

Evaluation of source reduction alternatives is not being considered at this time as the Kern County unincorporated area is currently in compliance with diversion goals and disposal is less than the corresponding ceiling for Per Capita Disposal.

4.7 Program Selection

See Section 4.3 – Existing conditions.

4.8 Program Implementation

Programs are ongoing.

4.9 Required Tasks and Implementation Schedule

Programs are ongoing.

4.10 Program Implementation Costs

The Department does not directly track Source Reduction costs.

4.11 Monitoring and Evaluation

KCPWD submits the Electronic Annual Report to CalRecycle noting any program changes and program results when available.

5 RECYCLING COMPONENT

5.1 Introduction

Recycling has demonstrated itself to be an effective strategy for reducing the volume of solid waste requiring disposal in many communities in California. According to the California Waste Management Act of 1989 recycling has a broad meaning and includes reusing materials to recreate the same product.

There are two basic approaches to separating recyclable materials from the waste stream. In the first approach, municipal solid waste (MSW) is "source-separated" at the point of generation. Source separation strategies include segregated collection and processing of green waste and single stream recyclable materials. Source separation strategies also include drop-off and buy-back programs as well as self-haul diversion programs conducted at integrated waste management facilities. A second approach, mixed waste processing, includes co-mingled collection of municipal solid waste (MSW) and separation of recyclable materials from the mixed waste stream.

In 2006, CalRecycle contracted with RW Beck and Cascadia Consulting Group to conduct an evaluation of various types of Material Recovery Facilities. The Study was entitled *Characterization and Quantification of Residuals from Materials Recovery Facilities* (2006 Cascadia MRF Study).

Average Quantity of Incoming Material and Residuals, 2005

MRF Type	Quantity of Incoming Material (tons)	Quantity of Residual (tons)	Residual Percentage	Diversion Percentage
Single-Stream Source Separated	52,900	7,400	14%	86%
Multi-Stream Source Separated	20,900	1,300	6%	94%
Mixed Waste Co-Mingled	234,700	189,800	81%	19%
Construction & Demolition	40,000	9,170	23%	77%

The collection and separation method of a recycling program will ultimately affect the diversion potential. According to the 2006 Cascadia MRF Study, "*the incoming material at mixed waste processing facilities is essentially municipal solid waste and the residual percentage is predictably much higher than any other type. Many mixed waste MRFs are increasingly accepting more commercial waste and less residential waste, as commercial waste typically has a higher degree of recoverable materials. These types of MRFs attempt to remove as many recyclables as possible but there is typically more moisture, food contamination, and more unrecoverable material to sort through. Since incoming quantities are much larger, these types of MRFs often load the processing line at a higher rate.*"

Source Separated collection and processing generates less residual waste due to the quality of incoming material and the reduction in contamination. This is demonstrated in Table 3-4 above. The Tehachapi Landfill, the disposal facility for the Tehachapi Recycling Facility, a mixed waste processing facility, had the highest percentage of traditional recycling material (46%) and compostable organics (38%) residual and the lowest percentage of construction and demolition (11%) of any of the four disposal facilities evaluated. The Tehachapi Recycling Facility has been in operation for over 20 years. At the same time, the Bena Landfill, the disposal facility for the Metro Bakersfield area, and the beneficiary of the Mt. Vernon Composting Facility operations, had the lowest percentage of compostable organics (19%). The Delano Transfer Station, benefiting from source separated curbside programs in Wasco, Delano, and McFarland, along with aggressive diversion programs at the Delano Transfer Station had the lowest percentage of traditional recyclable materials (38%).

The evaluation and results of 2006 Cascadia MRF Study closely correlate with the analysis and results of the County of Kern Recycling & Waste Planning Progress Report (HF&H), October 6, 2009. The Working Group for each of the four regional areas (West, Central, North-Central and East) ultimately recommended that source separated collection and processing of recyclable materials be implemented throughout the County unincorporated area.

5.2 Objectives

The initial SRRE identified specific objectives to achieve during the short-term and medium-term planning periods. Unincorporated Kern County met and exceeded the mandated diversion goals of 25 percent by 1995 and 50 percent by 2000. The Kern County unincorporated area is currently in compliance with diversion goals (64.4 percent for 2014) and disposal is less than the corresponding ceiling for Per Capita Disposal.

5.3 Waste Types Targeted for Recycling

The County targets a wide range of waste types for recycling including but not limited to:

- Inert Materials
- Construction and Demolition
- Compostable Organic (green/wood/food waste)
- Corrugated cardboard and recyclable paper
- Ferrous metals
- Glass bottles/containers
- Plastic bottles/containers/furniture/toys, agricultural plastics, etc.
- Aluminum/bi-metal cans
- White goods (appliances)
- Electronic Waste
- Tires

5.4 Existing Programs

Diversion programs currently implemented in the unincorporated areas of Kern County include, but are not limited to, the following:

- Mixed Waste Processing (East Kern), 1990
- Residential buy-back, 1990
- Special collection seasonal
    - Christmas trees, 1990
- Residential drop-off, 1992
- Land Use Fee/Gate Fee, 1993
- Residential and Commercial Organics Recycling, 1993
- Self-haul source separated diversion programs at solid waste facilities.
- Source Separated Curbside Recycling (San Joaquin Valley and Mountain Areas)
- Extensive educational and public informational programs
- A pricing incentive (e.g. premium gate fee for mixed C&D) is charged at the Bena, Shafter-Wasco, Taft and Tehachapi Landfills to encourage the recycling of construction and demolition debris (C&D) through the MRC and the Tehachapi MRF, 2010.
- A pricing incentive (e.g. half price Gate Fee reduction for select source separated materials) is charged at most landfills and transfer stations to encourage the diversion/recycling of source separated recyclable materials through solid waste facility diversion programs.

Solid Waste Collection Services are a critical component in achieving diversion mandates. Solid Waste Collection Services support and enhance diversion/recycling programs by providing bulky waste collection and source separated recyclables and green waste curbside collection. The KCPWD has recently amended five Franchise Hauler contracts to include expansion of Curbside Bulky Waste and Source Separated Curbside Recycling at no additional charge to residents.

- Curbside Bulky Waste Collection – available in all Franchise Areas
- Source Separated Curbside Collection
  - Metropolitan Bakersfield Universal Collection Area (UCA)
    - Green Waste, 1999
    - Recycling, 2012
  - Taft UCA - Recycling 2016/2017
  - Lost Hills UCA - Recycling 2018
  - Buttonwillow UCA - Recycling 2018
  - South Shafter UCA
  - Lebec/Frazier Park Urban Franchise Area – Recycling 2016
  - Housing Authority near Delano – Recycling 2016
- Blue Bag Collection - Kern River Valley, 2016
- Mandatory Commercial Recycling, 2012, Program Summary Appendix I

5.5 Evaluation of Alternatives

The County of Kern Recycling & Waste Planning Progress Report (HF&H), October 6, 2009, presented a number of key findings that have provided guidance and have informed policy to enhance diversion countywide and move toward the statewide strategic goal of 75% by 2020.

Key Findings:

1. Overall, countywide annual demand for materials management via landfill disposal or material recovery is projected to increase by more than 32% by 2020, adding more than 366,000 tons to the system, over 246,000 tons (67%) of which is projected to be landfilled (under current conditions).

2. The County appears to have sufficient system-wide disposal capacity during the planning period (***Status: 2014 Countywide Siting Element***).

3. If none of the East County landfills receive permit and physical expansions, the East Region area is projected to exhaust the current permitted disposal capacity during 2017. However, KCWMD is moving forward to expand the Ridgecrest and Mojave-Rosamond Sanitary Landfills. ***(Status: Landfill expansions completed).***

4. While some programs (e.g. Delano Universal Blue-Cart) appear to be more successful than others (e.g. Bakersfield Voluntary Blue-Cart) in removing traditional recycling materials, significant opportunities remain for removing these materials from the residential sector waste stream through expansion of universal programs throughout the County. ***(Status: MRC MRF and Universal Blue-Cart completed in Metro Bakersfield 2012 and scheduled in other Universal Collection Areas 2016 – 2018).***

5. Consistently, in each region of the County, nearly half of the commercial sector waste stream currently disposed of in landfills, is comprised of traditional recycling materials. Therefore, significant diversion opportunities are available in this sector and facility and program development targeted at these material types should be a high priority. ***(Status: Mandatory Commercial Recycling implemented 2012).***
6. Traditional recycling materials (i.e. paper, cardboard, glass, plastic, and metals) are the most prevalent materials in the County's waste stream that are being disposed. Programs targeting these materials have the potential to divert the greatest amount of material.
7. As a whole, the organics diversion programs and facilities available in the metro-Bakersfield area appear to be the most effective at diverting compostable organics (e.g. leaves, brush, grass, branches, etc.) from disposal. With nearly a quarter of the County waste stream comprised of organics, programs targeting these materials, particularly where they are generated in large quantities, should be included in the System Plan. ***(Status: Organic Diversion Strategy adopted 2013).***
8. While construction activity has slowed significantly in recent years, C&D materials still represent nearly 20% of the remaining waste stream. Programs and facilities targeting these material types would be capable of diverting significant volumes of material currently. ***(Status: Tehachapi Recycling Inc. MRF est. 1993, Metropolitan Recycling Corp. C&D est. 2002, price incentives est. 2010).***

Additionally, the working groups generally recommended that:

- The County establish a planning goal of achieving a 75% diversion rate by 2020.
- The County's recycling processing infrastructure include one or more "clean" material recovery facilities (MRF). ***(Metropolitan Recycling Corp. Source Separated "Clean" MRF est. 2012, Carousel Recycling est. 2012).***
- Universal residential source separated curbside recycling be provided to all single- and multi-family dwellings, at least, within existing universal service areas (except in the West Region, where curbside recycling has been identified for "later" implementation). (***Universal Blue-Cart Metro Bakersfield 2012, and scheduled in most Universal Collection Areas 2016 - 2018).***
- Single-stream and source separated recycling be offered to all businesses within the County, subject to the requirements of the AB 32 Scoping Plan regulations for "Mandatory Commercial Recycling." (***Mandatory Commercial Recycling with single-stream source separated recycling est. 2012).***
- A pricing incentive (e.g. surcharge for mixed recyclables) be created at the landfills and transfer stations throughout the County to encourage the recycling of construction and demolition debris (C&D) through the MRC and the Tehachapi MRF. (***Pricing incentives to encourage C&D recycling est. 2010).***
- The recycling areas at the County's landfills and transfer stations include expanded recycling opportunities (i.e. similar to the McFarland/Delano or Lebec Transfer Stations) to help residents and businesses improve recycling of self-haul materials. (***Diversion areas expanded and enhanced at Bena 2004, Shafter 2006, Taft 2011).***

- The Board adopt no new formal policies (e.g. Landfill Bans, MRF First, C&D Ordinance, Local Retailer Responsibility) or ordinances as part of this System Plan, except for those which the Board is likely to be required to implement by pending regulatory processes (e.g. AB 32 requiring a Mandatory Commercial Recycling Ordinance). (***Mandatory Commercial Recycling Ordinance approved 2012).***

5.6 Recycling Alternatives and Additional Recycled Materials

New Recycling Alternatives are not being considered at this time. However, source separated diversion programs implemented at solid waste facilities will be expanded as appropriate, with the potential of a resource recovery/reuse store. Residential and commercial source separated collection services are being expanded/converted to maximize recycling programs. The County also anticipates the implementation of Mattress recycling at Solid Waste Facilities under the Mattress stewardship program.

To enhance existing recycling programs and move toward the 75 percent goal, programs were evaluated to estimate additional diversion. The estimates reflect benchmarks for similar programs through the state. The revised estimates also present a range of potential tonnages that reflects early program results as well as the possible results of programs as they mature and are improved over time.

COUNTYWIDE ADDITIONAL DIVERSION ESTIMATE

Policy, Program, or Facility Alternative	Expansion (tons)	Mature (tons)	75% Goal
Single-Family Curbside Three Stream Collection:			
Single-Stream Recycling	42,996	64,920	
Organics Recycling	1,960	7,244	
Single-Family Pub. Ed & Outreach*	4,995	30,927	
Subtotal Single-Family Curbside Three Stream	49,952	103,091	
Multi-Family Recycling Collection	3,288	4,905	
Commercial Recycling:			
Voluntary	5,709	8,929	
Mandatory/Universal	27,995	43,783	
Large Generator Technical Assistance*	3,745	22,591	
Large Event & Venue Recycling	21	58	
Subtotal Commercial Recycling	37,469	75,361	
Resource Recovery Park (Convenience)	13,231	42,325	
Reuse Store	960	1,680	
C&D Recycling/ Price Incentive	4,554	50,321	
Early Implementation Item TOTAL (Countywide)	**109,454**	**277,683**	**384,531**

Note: Diversion estimates assume participation in all incorporated and unincorporated areas.
* Reflects additional tons associated with increased public education, outreach, and technical assistance.

5.7 Market Conditions

Since 2008, the recyclable commodity market has experienced volatility due to economic recession and labor disputes effecting Southern California ports. Kern County emphatically supports CalRecycle's Strategic Priority to expand local manufacturing infrastructure to protect California recycling efforts from global market uncertainties.

5.8 Monitoring and Evaluation

KCPWD submits the Electronic Annual Report to CalRecycle noting any program changes and program results when available.

6 COMPOSTING COMPONENT

6.1 Introduction

In the early 1990's Kern County and the City of Bakersfield targeted green waste and wood waste diversion as a primary and necessary component to cost effectively meet the original AB 939 diversion mandates. The following factors informed this decision:

- A long growing season and large residential parcels resulted in green waste and landscape material comprising over 30 percent of the waste stream countywide.
- The standard frequency of residential trash service was twice per week due to relatively high seasonal temperatures.
- Distinctive to Kern County, garden/landscape services typically include the removal and delivery of landscape trimmings to a solid waste/composting facility.

The Kern County agricultural industry affords local markets for compost.

6.2 Goals and Objectives

The initial SRRE identified specific objectives to be accomplished during the short-term and medium-term planning periods. Unincorporated Kern County met and exceeded the mandated diversion goals of 25 percent by 1995 and 50 percent by 2000. The Kern County unincorporated area is currently in compliance with diversion goals (64.4 percent for 2014) and disposal is less than the corresponding ceiling for Per Capita Disposal. The SRRE 2015 Amendment includes the following:

- The 2015 Kern County Organic Diversion Strategy (Appendix E),
- The 2015 Compostable Organics Program (Appendix J), and
- The AB 1826/Commercial Organic Recycling Implementation Plan (Appendix J).

6.3 Existing Programs

Composting programs currently being implemented in the Metro-Bakersfield unincorporated areas of Kern County include, but are not limited to, the following:

- Residential and Commercial Self-Haul Green Waste (1994)
- Residential Curbside Green Waste Collection (1999).

The City of Bakersfield took the lead to develop the Mt. Vernon Green Waste Facility. In 1992, the County and City entered into a joint agreement to fund the composting

facility. The Mt. Vernon Green Waste Facility was instrumental in creating an economic incentive for "clean green" waste by rejecting any contaminated yard waste. Gardeners/landscapers were responsible to keep the yard trimmings clean, free of litter and trash, or their loads would be rejected. Rejected green waste would necessitate a longer haul distance to the landfill. As a result, organic recycling of green waste and wood waste in the Metro area has been occurring successfully for over 20 years. In 2000, the County, the City, and the franchise haulers implemented automated residential refuse collection and curbside collection of green waste. To accomplish this the frequency of service was modified from twice per week refuse collection to once per week refuse and once per week green waste collection for minimal additional cost.

Wood waste diversion was implemented at most County landfills and transfer stations in 1996. Wood waste consists of lumber and tree branches. The material is separated, stockpiled, and ground. The ground wood waste is typically sold for biomass fuel to facilities such as Delano Energy, or used on-site for erosion control. Building on the success of the Metro green waste program and the County wood waste program, the County expanded green waste diversion at the Shafter-Wasco Recycling and Sanitary Landfill (RSLF) in 2003 and the Bena Sanitary Landfill (RSLF) in 2004.

The San Joaquin Valley portion of Kern County has the following permitted private composting facilities:

- Blossom Valley Organics South near Arvin,
- Synagro South Kern Compost Facility near Mettler, and
- Liberty Composting near Lost Hills.

Blossom Valley Organics South accepts produce waste from large commercial grocers throughout the state. Synagro and Liberty Composting, both biosolids composting facilities, primarily accept green waste from southern California. Synagro has a Conditional Use Permit requirement to retain 10 percent of their permitted capacity to accept green waste or wood waste from Kern County jurisdictions.

Green waste from the Shafter-Wasco Landfill was initially transferred to Liberty Composting at a charge. The Department currently utilizes the Synagro Facility at no charge. Recently, the Department has implemented green waste screening and processing at the Shafter-Wasco RSLF to meet the more stringent acceptance criteria of the Synagro Compost Facility. It should be noted that, typically, the private facilities do not accept self-haul organic waste nor do they accept non-screened or processed green waste collected straight from the curb.

The County was first in the State to amend its Countywide Siting Element to include an Engineered Municipal Solid Waste (EMSW) Conversion Facility. The Lehigh Cement Plant near Tehachapi, California utilizes EMSW as well as biomass in lieu of coal and coke to meet AB 32 standards and reduce greenhouse gas emissions. The County supports EMSW Conversion technology in conjunction with biomass conversion as a cost effective strategy to jointly meet waste diversion and GHG reduction goals.

6.4 Quantification of Compostable Materials

KCPWD submits annual reports to CalRecycle that include diversion attributed to compostable organic diversion programs, where available.

6.5 Identification and Evaluation of Alternatives

The KCPWD believes it is in the best interests of the public to develop centrally located organic programs with a critical mass of green waste and wood waste to achieve cost effective organic processing and diversion for both residential and commercial customers. The Department can best achieve this by working together with the cities and the franchise haulers to handle as much of the organic waste stream within the County solid waste system and fee structure as possible. The Department recommends that curbside green waste be accepted at the Mt. Vernon Green Waste Facility and at designated Kern County facilities at no charge and that the cost of processing and diversion be paid for by the Solid Waste Enterprise Fund. This will provide centrally located organic programs and resolve the inequities created by the existing policy of having each jurisdiction pay their pro rata share of curbside green waste processing while at the same time paying the Land Use Fee. This will increase the County's pro rata share for the Mt. Vernon Green Waste Facility. More importantly, this policy change is consistent with the transition from an emphasis on solid waste disposal to a confirmation of integrated waste management.

In August 2013, the Board of Supervisors adopted the 2013 Kern County Solid Waste Infrastructure Plan which identified and designated the necessary facilities to provide the organic diversion programs. As indicated in the Infrastructure Plan, the Mt. Vernon Green Waste Facility is currently providing excellent service to Metro Bakersfield. The Shafter-Wasco RSLF and Bena RSLF have the ability to expand organic processing and service the valley communities, and the Mojave-Rosamond RSLF is ideally suited to provide similar services to the desert region.

In the future, if the existing and proposed programs do not adequately divert sufficient volumes of organic waste from disposal, the County may need to consider implementing an economic incentive for residents and businesses by charging for green waste at disposal sites. "Chargeable" green waste could mean charging gardeners/landscapers for green waste disposal whether the green waste was generated from residential or commercial parcels. KCPWD realizes that a "chargeable" green waste policy may have unintended consequences, such as increased illegal dumping, increased contamination, and the need to develop separate commercial green waste collection. A "chargeable" green waste policy is also contrary to procedures at the Mt. Vernon Green Waste Facility. However, if the State implements an outright ban on the disposal of organic waste, a "chargeable" green waste policy for disposal may be an appropriate tool to effect the needed change. KCPWD intends to keep this option open, but recognizes that a shift to "chargeable" green waste would be a significant change that needs further evaluation.

6.6 Program Selection

See section 6.3 – Existing conditions.

6.7 Composting Program Implementation

Programs are ongoing and expanding.

6.8 Monitoring and Evaluation

KCPWD submits the Electronic Annual Report to CalRecycle noting any program changes and program results when available.

7 SPECIAL WASTE COMPONENT

7.1 Introduction

Special Wastes are those wastes that require special handling and disposal considerations. This component examines the methods by which Kern County manages special waste materials in unincorporated areas.

7.2 Objectives

The initial SRRE identified specific objectives to be accomplished during the short-term and medium-term planning periods. Unincorporated Kern County met and exceeded the mandated diversion goals of 25 percent by 1995 and 50 percent by 2000. The Kern County unincorporated area is currently in compliance with diversion goals (64.4 percent for 2014) and disposal is less than the corresponding ceiling for Per Capita Disposal.

7.3 Existing Programs

Special waste diversion programs currently being implemented in the unincorporated areas of Kern County include, but are not limited to, the following:

- Tires (1993)
- White goods (1993)
- Scrap metal (1990)
- Wood waste (1994)
- Concrete/asphalt/rubble (1994)
- E-Waste (2002)
- Household hazardous waste (1990)
- Extensive educational and public informational programs (such as the departmental website, Waste Watch commercials on local television stations, and brochures)

7.4 Identification and Evaluation of Alternatives

Existing programs for tires, white goods, scrap metal and E-Waste currently appear to be adequate and sufficient. The County anticipates implementing Mattress recycling as part of the statewide Mattress stewardship program. Franchise Haulers in the Kern River Valley and Delano/Glennville area have implemented local drop boxes for sharps collection. The County has also significantly expanded Household Hazardous Waste Collection services countywide. The Household Hazardous Waste program and services is more appropriately and accurately described in the Household Hazardous Waste Element.

7.5 Program Selection

See Section 6.3 – Existing conditions.

7.6 Special Waste Program Implementation

Programs are ongoing and expanding.

7.7 Monitoring and Evaluation

KCPWD submits the Electronic Annual Report to CalRecycle noting any program changes and program results when available.

8 SOLID WASTE FACILITY CAPACITY COMPONENT

8.1 Introduction

Solid Waste Facility Capacity: identifying the impact of the increased diversion rate on the amount of landfill capacity needed by the jurisdiction to meet the needs of the community for fifteen years.

In 2014, the County revised the Countywide Siting Element to reflect the 2013 Infrastructure Plan as well as provide for identification of Engineered Municipal Solid Waste (EMSW) conversion facilities.

Annually, the Department updates and calculates municipal landfill capacity to assess the permitted disposal capacity in Kern County. Since 1990, the Department, together with the cities, landfill operators, and haulers, has taken a number of steps to extend the capacity at Kern County landfills. As a result, many landfills have been able to operate up to 15 years longer than originally anticipated, maximizing the investment in existing facilities and postponing the need for replacement facilities. The primary reasons for extended life at Kern County landfills are as follows:

- Improved air space density as a result of better waste compaction and operations;
- Implementation of Alternate Daily Cover programs, using tarps in lieu of soil cover;
- Approval to vertically expand the Mojave-Rosamond, Ridgecrest, Shafter-Wasco, Taft, and Tehachapi landfills;
- Approval to laterally expand the Mojave-Rosamond Landfill; and
- Effective waste diversion and recycling programs.

Utilizing the 2015 Capacity Study, current countywide permitted capacity is estimated to provide Kern County with approximately 61 years of disposal capacity. The full countywide master-planned capacity approved in California Environmental Quality Act (CEQA) documents is estimated to provide Kern County approximately 120 years of disposal capacity.

8.2 Goals and Objectives

The primary goal of the Infrastructure Plan is to project the future solid waste facility needs of Kern County. Specific policies, as stated in the Infrastructure Plan, have been established to assist the County obtain this goal. These specific goals and objectives include:

- Provide disposal capacity for at least 15 years for municipal solid waste disposal.
- Respond to growth and waste generation spatial distribution.

- Assess facility options to achieve and maintain mandated source reduction and recycling goals.
- Assess facility options to provide adequate Household Hazardous Waste (HHW) collection and processing countywide.
- Balance level of service with economic and environmental constraints.
- Develop a facility implementation schedule.

8.3 Description of Existing Solid Waste Facilities

A full description of the Solid Waste Facilities in Kern County may be found in the recently revised 2014 Countywide Siting Element.

8.4 Facility Needs Projection

The Public Works Department recognizes that waste facility siting, operations, and closure, are significant commitments of County resources. The Department is also committed to constantly improving the way in which the County's waste stream is managed. Therefore, in developing and updating the Infrastructure Plan, regulatory trends are evaluated and related to industry trends and the County's experience in owning and operating facilities. Over the last 25 years, the recycling, composting and disposal infrastructure have become truly integrated, and are poised to expand and evolve to include anaerobic digestion and advanced/conversion technology. Existing public and private solid waste infrastructure provides adequate recycling and composting capacity and is capable of being expanded to meet the 75% diversion goal by 2020. The Kern County solid waste infrastructure provides adequate Household Hazardous Waste (HHW) services and is capable of being expanded to meet public demand. Finally, the Kern County solid waste infrastructure provides adequate disposal capacity and is capable of meeting the projected integrated waste management needs of the County through 2040 and beyond.

8.5 Projected Planning Approach and Policy

Policies, as adopted in the 2014 Countywide Siting Element and approved in the Infrastructure Plan include:

- Kern County Waste Management Department, currently the Kern County Public Works Department, will site no new sanitary landfills; instead expand existing disposal facilities only.
- Consolidate County-owned disposal sites down to three regional waste management facilities.
    - Recognize and reserve the Shafter-Wasco Integrated Waste Management Facility (IWMF), the Mojave-Rosamond IWMF, and the Bena IWMF as the regional waste management facilities, and designate these facilities for advanced/conversion technologies.
- Protect County owned landfills from encroachment of incompatible uses by acquiring buffer zones around disposal sites.
- Certificates of Participation will no longer be used to finance County capital projects. The Solid Waste Enterprise Fund will accrue capital reserves to fund future capital projects.

- Utilize the following guidelines to balance the level of service with economic and environmental constraints.
    - Tailor days and hours of operation commensurate with community demand and usage.
    - Limit volume of waste accepted at transfer stations based on haul distance to nearest disposal site (direct-haul large commercial and franchise loads to nearest landfill).
    - Implement a "30-minute" travel standard for small volume customers as a guideline for facility retention/siting.
    - Provide communities with options to elect alternate levels of service when appropriate.
    - Implement Universal Refuse Collection as appropriate.
- Designate the Shafter-Wasco Recycling and Sanitary Landfill as the third Regional Integrated Waste Management Facility to serve western Kern County, and relinquish the remaining disposal capacity of the Lost Hills Landfill.
- Upon closure of the Tehachapi Landfill and operation of the Tehachapi Transfer Station, re-direct the Tehachapi waste stream temporarily to the Bena Landfill for operational efficiency and to postpone the capital construction of liner and road improvements projected for the expansion of the Mojave-Rosamond IWMF.
- Recognize and reserve the Shafter IWMF, the Mojave IWMF and the Bena IWMF as the regional integrated waste management facilities, and designate these facilities for advanced/conversion technologies.

The 2014 Countywide Siting Element provides a tentative schedule for existing facility closure and new facility construction. Operational efficiencies and facility expansions continue to result in extending the capacity and site life at many facilities. The Department will continue to update the Landfill Capacity Report on an annual basis and will update the Infrastructure Plan and Countywide Siting Element as needed.

9 EDUCATION AND PUBLIC INFORMATION COMPONENT

9.1 Introduction

The Education and Public Information Component is the backbone of the Source Reduction and Recycling Element. Implementation of programs addressing reduction, recycling, composting, special waste, and household hazardous waste depend of the success of the implementation of the Education and Public Information Component.

Education is probably the best-known approach to achieving public participation in any program. Education, public involvement, and promotion are vital aspects and are key to a successful long-term program.

9.2 Objectives

The initial SRRE identified specific objectives to be accomplished during the short-term and medium-term planning periods. Unincorporated Kern County met and exceeded the mandated diversion goals of 25 percent by 1995 and 50 percent by 2000. The

unincorporated areas of the county have maintained a diversion rate that exceeds 50 percent every year since then.

9.3 Existing Program Descriptions

Some of the educational programs identified in the initial SRRE were developed and fully implemented while others remained in concept only. Several of the educational programs that were implemented have been phased out and some are still currently in existence. New outreach programs have also been developed and implemented that were not identified within the initial SRRE.

This section lists all existing education and public information programs and activities within the unincorporated areas of the county. Many programs do, however, affect other jurisdictions. The Electronic Annual Report outlines the categories that jurisdictions should use to conduct educational outreach. The following list includes the current programs promoting source reduction, recycling, composting, and safe handling of household hazardous waste within each category:

9.3.1 Electronic

- Website

The Department website, www.kerncountywaste.com, has proven to be very successful with 65,475 unique site visits in FY 2013-14. The website provides extensive information about the programs and services offered by the Department and links to other entities that support the waste management system in the County. The website software was updated to provide responsiveness to all devices including tablet, mobile phone, laptop and desktop applications. In addition, new features and functions such as search engine optimization and video applications have made significant improvements to the overall website capabilities. These education efforts target and impact all City and County communities.

- Television & Theater

Waste Watch program features 30-second television commercials about landfill diversion programs, household hazardous waste, curbside recycling, bulky waste collection, illegal dumping and waste related messages at all network television stations and cable stations including Spanish language stations. These commercial spots are also being featured periodically at movie theaters throughout the County and on the website.

In addition, half hour shows with extensive information about the disposal and recycling programs and services are produced and aired through the Inside Kern program on KGOV, the County's television station.

- Radio

Sixty-second radio commercials about various recycling programs including Used Oil Recycling are scheduled on a periodic basis on both English and Spanish stations.

9.3.2 Print

Educational publications are printed and distributed through various venues including landfills, transfer stations, community events, direct mail, City and County government

buildings, etc. The Kern County Recycling Guide is a comprehensive publication with information about landfill diversion programs, household hazardous waste, curbside recycling, bulky waste collection, illegal dumping, construction & demolition waste, greenwaste, and many other related topics. This publication is prominently featured on the Home page of the Department website where it can be downloaded and is distributed to over 500,000 homes and businesses through YP telephone books. The following is a list of other publications and brochures that are produced and distributed:

- Special Waste Facility- Flyers (English and Spanish)
- Conditionally Exempt Small Quantity Generator
- Sharps Brochure (English and Spanish)
- Large Item Collection & Curbside Recycling
- Gate Fee Card
- Disposal Site Guides (cards include Green/Wood Waste, C&D, Electronics, Metals, Tires, Used Oil, Non-Friable Asbestos, Treated-Wood, Drop-off Recycling)
- Keep Kern Clean (English & Spanish)
- Household Hazardous Waste Collection Events
- Used Oil Recycling & Certified Collection Centers
- Tarp Your Trash
- Waste Watch Newsletter

9.3.3 Outreach

The Department provides direct outreach to the public by participating at various community events and conducting presentations such as:

- Display educational booth at Earth Day Events, Health & Safety Fairs, Career Days, Community Resources Fairs/Events and others.
- Mandatory Commercial Recycling presentations and exhibit booths at several Chambers of Commerce events and Professional Organizations and Business conferences.
- Provide tours of County landfill/diversion facilities and Special Waste Facilities.
- Sponsor Kern County Fair Environmental Awards.
- Handle over 100 phone calls per day providing the public information regarding recycling & disposal services available throughout the County. Assistance in Spanish is provided when necessary.

9.3.4 Schools

The County educates and informs elementary school children about recycling, waste reduction and environmental stewardship through the Clean Kids Hit the Road puppet performances. Over 20 schools from both City and County areas participate in this program reaching over 20,000 children with messages about proper hazardous waste disposal, recycling programs, illegal dumping, and other waste management issues.

9.4 Identification and Evaluation of Alternatives

This section is not applicable, because the unincorporated areas of Kern County have already exceeded the 50 percent goal established by AB939.

9.5 Program Selection

This section is not applicable, because the unincorporated areas of Kern County have already exceeded the 50 percent goal established by AB939.

9.6 Program Implementation

Programs are ongoing.

Monitoring and Evaluation

KCPWD submits the Electronic Annual Report to CalRecycle noting any program changes and program results when available.

10 FUNDING COMPONENT

10.1 Introduction

In the state of California, the responsibility for providing adequate solid waste disposal capacity and services is assigned by the State to the County, while the responsibility for implementing recycling programs and achieving diversion mandates is assigned to individual jurisdictions. In most jurisdictions, public and private solid waste facilities charge a gate fee to cover the cost of facility operations for landfills, transfer stations, composting facilities, and recycling facilities. Residential and commercial customers pay the gate fee either through their collection/hauling services or directly at the gate of the facility. In the early 1990s, concerns over the increased cost of recycling and waste management services and the potential unintended consequence of illegal dumping, prompted the Board of Supervisors to adopt a system by which residential parcels paid a Land Use Fee (LUF) collected on the tax roll, and commercial customers paid a Gate Fee (GF). The system incentivized businesses to recycle and discouraged illegal dumping by residents. The LUF/GF system was implemented countywide and created the Solid Waste Enterprise Fund. For the last 25 years, the Solid Waste Enterprise Fund has provided stable funding for the construction, operation and eventual closure of the landfills, transfer stations, and special waste facilities countywide, as well as the remediation and maintenance of the legacy burn dumps.

The Land Use Fee collected on the residential tax roll countywide provides stable funding for a variety of facilities and programs. As a result, recycling and diversion program at solid waste facilities, Household Hazardous Waste collection services and Public Education and Outreach efforts are distributed and available to residents regardless of jurisdiction at no charge.

Solid Waste Collection Services and their related fees are not part of the Solid Waste Enterprise Fund.

10.2 Objectives

The following objectives are intended to provide stable funding for the following waste management facilities and programs:

- Integrated Solid Waste Management Planning;
- Administration of the County Integrated Waste Management Plan
- Construction, operation and closure of the landfills, transfer stations countywide;
- Remediation and maintenance of the legacy burn dumps;

- Recycling and waste diversion programs at County solid waste facilities; and
- Household Hazardous Waste Collection Facilities and Services.

10.3 Current Funding Sources

- Land Use Fee – Residential Parcels
- Gate Fee – Commercial Generators
- Grant Funding related to the Household Hazardous Waste Program, Used Oil Program, or Burn Dump Remediation Project.
- Revenue from the sale of diverted/recycled material.
- Product Stewardship Organization: PaintCare

10.4 Implementation Costs

The County does not directly track the implementation cost of funding the Solid Waste Enterprise System.

10.5 Revenue Sources and Contingency Funding

The Department maintains a 15-year financial forecast with adequate financial reserves authorized by the County Administrative Office.

11 INTEGRATION COMPONENT

11.1 Introduction

11.2 Solid Waste Management Practices

The solid waste management programs implemented as part of the Source Reduction and Recycling Element (SRRE) efforts to comply with AB 939 follow the solid waste management hierarchy and well as the Waste Diversion Strategy Documents listed in Section 2.2 above and included in the appendices.

The Countywide implemented programs in all component areas fulfill diversion objectives in the following order:

1. Source Reduction
2. Recycling and Composting
3. Engineered Municipal Solid Waste Conversion
4. Land Disposal

In light of these priorities, Kern County has developed an integrated waste management system that places preference on source reduction, education, recycling and composting programs for all solid waste generators in the County. The County's integrated waste management system established the following programs within each of the three successive diversion objectives.

Source Reduction:

- Alternate Funding Mechanism (Gate Fee/Tipping Fee)
- Education
- County Waste Reduction and Procurement Policies
- Support of Extended Producer Responsibility and Product Stewardship
- Awards

Recycling and Composting:

- Recycling/Diversion Programs at Landfills and Transfer Stations
- Buy-back Centers
- Source Separated Green Waste Collection and Composting
- Source-Separated Drop-Off Areas
- Source Separated Curbside Recycling
- Recovery of Construction and Demolition Debris
- Implementation of Universal Collection in unincorporated areas

Engineered Municipal Solid Waste (EMSW) Conversion:

- EMSW Conversion in conjunction with Biomass Conversion

The County was first in the State to amend its Countywide Siting Element to include an Engineered Municipal Solid Waste (EMSW) Conversion Facility. The Lehigh Cement Plant near Tehachapi, California utilizes EMSW as well as biomass in lieu of coal and coke to meet AB 32 standards and reduce greenhouse gas emissions. The County supports EMSW Conversion technology in conjunction with biomass conversion as a cost effective strategy to jointly meet waste diversion and GHG reduction goals.

11.3 Integration of Program Components

The Land Use Fee for residential parcels has created the ultimate integrated funding mechanism. The Land Use Fee pays for Household Hazardous Waste programs, solid waste facility diversion programs, and compostable organic processing of curbside collected green waste countywide.

Commercial businesses also receive a 50% reduction of the Gate Fee for source separated diversion. The County anticipates establishing a commercial bin fee for commercial food waste to facilitate access of franchise collected food waste into municipal composting programs.

Integration between component programs, services and facilities is also the goal of the Public Education and Information Component of this plan. Educational efforts target all program areas of the programmatic components. The county has developed programs to target a number of different waste generators such as residential and commercial/industrial generators. These efforts reduce the generation and disposal the entire municipal solid waste stream.

Educational and informational programs provide a mechanism to change the purchasing, use and disposal habits of the community in order to reduce the quantity of waste disposed, and increase materials that are recyclable and compostable. The County presents information in the context of the entire solid waste management system in the County, drawing upon unified themes. Messages are aimed to complement and reinforce each other and inform citizens of the array of services and options existing.

11.4 Achievement of Diversion Mandates

Recycling is an ongoing activity in Kern County. In 1990, the solid waste diversion was estimated at 19.9 percent with approximately 5 percent credited to recycling. Solid

Waste Diversion has increased to 64.4 percent, as reported in the 2014 Electronic Annual Report.

11.5 Determination of Program Priorities

Kern County implemented programs that achieved and exceeded the AB 939 Diversion Mandates. In all cases, the Public Works Department designed the program implementation schedules in light of the goals and objectives established by this plan. The Department integrated program development to achieve overall waste management priorities.

The Public Works Department utilized the following criteria to select programs and set priorities among components:

- The hierarchy established by the AB 939 Regulations that encourages, in the following order, source reduction, recycling, composting, Engineered Municipal Solid Waste (EMSW) Conversion and land disposal.
- The existing waste management conditions and activities currently operating in the County.
- The County's waste stream composition and characteristics as identified in the 1990 WGS and subsequent site specific Waste Characteristic Studies.
- The integration of waste collection practices.
- Coordination and collaboration of City and County programs to provide consistent and cost effective programs.
- New and expanding legislative mandates.

11.6 Funding Source Schedule

The Department maintains a 15-year financial forecast including full integration of programs and facilities with adequate financial reserves authorized by the County Administrative Office.

11.7 Private and Municipal Investment

The KCPWD has significantly expanded to provide solid waste management services in Kern County. In 1990, the solid waste division of the KCPWD utilized 11 staff and multiple contract operators to provide services. The KCPWD currently employees over 100 staff and multiple contract operators to provide the expanded programs and services mandated by state law. The implementation of Mandatory Commercial Organic Recycling will increase staffing needs further.

The KCPWD works cooperatively and collaboratively with Franchise Haulers, private recyclers and contractors, and other municipal partners to implement solid waste collection and diversion programs to achieve and maintain the diversion mandates.

- Solid Waste Collection Services: Franchise Haulers.
- MRF Operations: Private and/or Non-profit investment.
- Compost Operations: Municipal and/or Private Investment.

SUMMARY OF PROCEEDINGS

BOARD OF SUPERVISORS - COUNTY OF KERN

1115 Truxtun Avenue
Bakersfield, California

Regular Meeting
Tuesday, November 10, 2015

2:00 P.M.

Note: Members of the Board of Supervisors may have an interest in certain contracts that the Board considers where the member holds a position on a non-profit corporation that supports the functions of the County. Supervisors are assigned to these positions as part of annual committee assignments by the Chairman of the Board. These interests include, with the Supervisor holding the position, the following: California State Association of Counties (Supervisors Perez and Gleason); Community Action Partnership of Kern (Supervisor Maggard); Kern County Network for Children (Supervisor Gleason); Kern Economic Development Corporation (Supervisors Maggard, Scrivner, and Perez); Southern California Water Committee (Supervisors Couch and Maggard); and Tobacco Funding Corporation, Kern County (Supervisors Couch and Perez).

BOARD RECONVENED

Supervisors: Gleason, Scrivner, Maggard, Couch, Perez
ROLL CALL: All Present

NOTE: The vote is displayed in bold below each item. For example, Gleason-Perez denotes Supervisor Gleason made the motion and Supervisor Perez seconded the motion.

CONSENT AGENDA/OPPORTUNITY FOR PUBLIC COMMENT: ALL ITEMS LISTED WITH A "CA" OR "C" WERE CONSIDERED TO BE ROUTINE AND APPROVED BY ONE MOTION.

BOARD ACTION SHOWN IN CAPS

REPORT ON ACTIONS TAKEN IN CLOSED SESSION ON TUESDAY, NOVEMBER 10, 2015, AT 9:00 A.M. -

Item No. 35 concerning a CONFERENCE WITH LABOR NEGOTIATORS - Agency designated representatives: County Administrative Officer, John Nilon, and designated staff - Employee organization: Service Employees' International Union, Local 521 (Government Code Section 54957.6) - HEARD; NO REPORTABLE ACTION

Item No. 36 concerning a CONFERENCE WITH REAL PROPERTY NEGOTIATORS - Kern County Property Assessor Parcel Numbers 436-062-04 (a portion), Property Owner: Kathleen A. Pierce Separate Property Trust; Agency Negotiators: John Nilon, County Administrative Officer and Jeff Frapwell, Assistant County Administrative Officer for General Services; Under Negotiation: Price and Terms of Payment (Government Code Section 54956.8) - HEARD; NO REPORTABLE ACTION

Item No. 37 concerning a PUBLIC EMPLOYEE PERFORMANCE EVALUATION - Title: County Administrative Officer (Government Code Section 54957) - HEARD; NO REPORTABLE ACTION

Item No. 38 concerning a CONFERENCE WITH LABOR NEGOTIATORS - Agency designated representative: Theresa A. Goldner, County Counsel - Unrepresented employee, County Administrative Officer (Government Code Section 54957.6) - HEARD; NO REPORTABLE ACTION

Item No. 39 concerning a CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION (Government Code Section 54956.9(d)(1)) Arthur Gray v. County of Kern, United States District Court Case No. 1:14-CV-00204 - HEARD; NO REPORTABLE ACTION

ADJOURNED AS BOARD OF SUPERVISORS; RECONVENED AS KERN SANITATION AUTHORITY

Perez-Gleason: All Ayes

KERN SANITATION AUTHORITY

C-1) Proposed Request for Qualifications (RFQ) to provide on call, as needed professional wastewater engineering services for Kern Sanitation Authority (Fiscal Impact: None) - APPROVED; AUTHORIZED DISTRIBUTION

Gleason-Maggard: All Ayes

ADJOURNED AS KERN SANITATION AUTHORITY; RECONVENED AS BOARD OF SUPERVISORS

Gleason-Maggard: All Ayes

PUBLIC REQUESTS

2) Request for hearing by Tejon Ranch Public Facilities Financing Authority for a finding that there is a public benefit from the improvements funded with proceeds of the 2015 Bonds issued by the Authority (Fiscal Impact: None) - HEARD PRESENTATION BY PAUL THIMMIG, BOND COUNSEL, TEJON RANCH PUBLIC FACILITIES FINANCING AUTHORITY; OPENED HEARING; NO ONE HEARD; CLOSED HEARING; APPROVED; ADOPTED RESOLUTION 2015-301

Perez-Gleason: All Ayes

PUBLIC PRESENTATIONS

3) This portion of the meeting is reserved for persons to address the Board on any matter not on this agenda but under the jurisdiction of the Board. Board members may respond briefly to statements made or questions posed. They may ask a question for clarification, make a referral to staff for factual information or request staff to report back to the Board at a later meeting. Also, the Board may take action to direct the staff to place a matter of business on a future agenda. SPEAKERS ARE LIMITED TO TWO MINUTES. PLEASE STATE AND SPELL YOUR NAME BEFORE MAKING YOUR PRESENTATION. THANK YOU!

NO ONE HEARD

BOARD MEMBER ANNOUNCEMENTS OR REPORTS

4) On their own initiative, Board members may make an announcement or a report on their own activities. They may ask a question for clarification, make a referral to staff or take action to have staff place a matter of business on a future agenda (Gov. Code Sec. 54954.2[a])

NO ONE HEARD

DEPARTMENTAL REQUESTS

PUBLIC WORKS DEPARTMENT - Building and Development

S.D. #3

CA-5) Request to approve Final Map for Tract 6656, Phase 1, northwest corner of Eucalyptus Drive and Gargano Street, Bakersfield area, Type "A" Subdivision, and approve and accept Tract improvements for public use, Cres Bakersfield, LLC (Fiscal Impact: None) - APPROVED; ADOPTED RESOLUTION 2015-302 MAKING FINDINGS PER SECTION 21151 OF PUBLIC RESOURCES CODE, SECTIONS 66473.5, 66474 AND 65567 OF GOVERNMENT CODE INCLUDING APPROVAL OF WAIVER OF SIGNATURE FOR MINERAL OWNERS WITHOUT SURFACE ENTRY RIGHTS AND EASEMENT HOLDERS PER SECTION 66436 OF GOVERNMENT CODE AND SECTION 18.45.020 D1 OF LAND DIVISION ORDINANCE (SECTION 18.05.030 K1,2,3 NOT APPLICABLE); ACCEPTED STREET, WATER AND SEWER IMPROVEMENTS AND DECLARED ROADS WITHIN TRACT 6656, PHASE 1, AS PUBLIC HIGHWAYS AND ACCEPTED AND INCORPORATED ROADS INTO COUNTY ROAD SYSTEM; APPROVED FINAL MAP; AUTHORIZED CLERK OF THE BOARD TO SIGN; APPROVED MAINTENANCE AGREEMENT; AUTHORIZED CHAIRMAN TO SIGN; RECEIVED AND FILED; ORDERED APPROVED FINAL MAP RECORDED

Perez-Gleason: All Ayes

S.D. #4

CA-6) Request to approve Final Map for Tract 6817, Phase 2; northeast corner of Meacham Road and Renfro Road, Rosedale area; Type "A" Subdivision, Porter and Associates, Inc., for 64 Meacham & Renfro LLC (Fiscal Impact: None) - APPROVED; ADOPTED RESOLUTION 2015-303 MAKING FINDINGS PER SECTION 21151 OF PUBLIC RESOURCES CODE, SECTIONS 66473.5, 66474 AND 65567 OF GOVERNMENT CODE INCLUDING APPROVAL OF WAIVER OF SIGNATURE FOR MINERAL OWNERS WITHOUT SURFACE ENTRY RIGHTS AND EASEMENT HOLDERS PER SECTION 66436 OF GOVERNMENT CODE AND SECTION 18.45.020 D1 OF LAND DIVISION ORDINANCE (SECTION 18.05.030 K1,2,3 NOT APPLICABLE); ACCEPTED LOT "A" IN TRACT 6817, PHASE 1, RECORDED IN BOOK 60, PAGES 165-168, OF MAPS, FOR STREET PURPOSES, AND ACKNOWLEDGED REVERSION OF CONDITIONAL OFFER OF DEDICATION OF INGRESS AND EGRESS ACROSS LOT "A"; APPROVED FINAL MAP; AUTHORIZED CLERK OF THE BOARD TO SIGN; APPROVED SUBDIVISION IMPROVEMENT AGREEMENT AND SUBDIVISION MONUMENTATION AGREEMENT; AUTHORIZED CHAIRMAN TO SIGN; RECEIVED AND FILED; ORDERED APPROVED FINAL MAP RECORDED

Perez-Gleason: All Ayes

PUBLIC WORKS DEPARTMENT - Engineering

S.D. #1

CA-7) Proposed Contract No. 15020 with Griffith Company for construction of Class I Bike Path on College Heights Boulevard, from Dolphin Avenue to Cerro Coso Community College, Ridgecrest, in an amount not to exceed $588,885 (Fiscal Impact: $588,885; Active Transportation Program Funds; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 837-2015

Perez-Gleason: All Ayes

S.D. #4

CA-8) Proposed Quitclaim Deed to Kern Land Partners, LLC, transferring an approximate total of 23,292 square feet of County-owned road easement located on Santa Fe Way, Bakersfield (Fiscal Impact: None) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN

Perez-Gleason: All Ayes

S.D.s #2 & #5

CA-9) Contract No. 15019, Notice of Completion with Griffith Company for construction on Buena Vista Boulevard, from Union Avenue to State Route 184, Bakersfield (Fiscal Impact: None) - RECEIVED AND FILED

Perez-Gleason: All Ayes

All S.D.s

CA-10) Proposed Request for Qualifications (RFQ) to provide on call, as needed environmental, geotechnical and civil engineering services at County Public Works facilities (Fiscal Impact: None) - APPROVED; AUTHORIZED DISTRIBUTION

Perez-Gleason: All Ayes

CA-11) Proposed Resolution for Congestion Mitigation and Air Quality (CMAQ) Program Applications to supersede Resolution 2015-249 approved September 1, 2015 (Fiscal Impact: None) - APPROVED; ADOPTED RESOLUTION 2015-304 SUPERSEDING RESOLUTION 2015-249

Perez-Gleason: All Ayes

PUBLIC WORKS DEPARTMENT - Operations and Maintenance

All S.D.s

CA-12) Request to set public hearing for consideration of proposed 2015 Amendment of the Unincorporated Kern County Source Reduction and Recycling Element of the Kern County Integrated Waste Management Plan (Fiscal Impact: None) - SET HEARING FOR TUESDAY, DECEMBER 15, 2015, AT 2:00 P.M.; DIRECTED CLERK OF THE BOARD TO PUBLISH NOTICE

Perez-Gleason: All Ayes

COUNTY ADMINISTRATIVE OFFICE

13) Response to September 1, 2015 referral regarding alternatives to improve transparency, consistency, and performing the audit function differently (Fiscal Impact: None) - RECEIVED AND FILED; DIRECTED COUNTY ADMINISTRATIVE OFFICE TO BRING BACK A PROPOSED STRUCTURE AND OUTLINE OF DUTIES TO CREATE AN AUDITING COMMITTEE AND DIRECTED COUNTY COUNSEL TO PROVIDE LEGAL ANALYSIS OF THE DEFINED RESPONSIBILITIES AND ROLES OF THE AUDITOR-CONTROLLER AS WELL AS BOARD OF SUPERVISORS AS IT RELATES TO THE AUDIT FUNCTION

Scrivner-Maggard: All Ayes

CA-14) Proposed revisions to County Administrative Policy and Procedures Manual - Chapter 1, Human Resources (Fiscal Impact: None) - APPROVED

Perez-Gleason: All Ayes

CA-15) Proposed revisions to County Administrative Policy and Procedures Manual - Chapter 2, Payroll Procedures (Fiscal Impact: None) - APPROVED

Perez-Gleason: All Ayes

CA-16) Proposed contribution to the National Brotherhood Association of Kern County for programs and services, in the amount of $500 (Fiscal Impact: $500; Budgeted; Discretionary) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER-COUNTY CLERK TO PAY

Perez-Gleason: All Ayes

CA-17) Proposed contribution to the Bakersfield Police Department Memorial Run in support of the Memorial Scholarship Fund for the children of fallen officers, in the amount of $500 (Fiscal Impact: $500; Budgeted; Discretionary) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER-COUNTY CLERK TO PAY

Perez-Gleason: All Ayes

CA-18) Proposed temporary assignment of Clerk of the Board of Supervisors to serve as Clerk of the Kern County Hospital Authority Transitional Governing Board (Fiscal Impact: None) - APPROVED

Perez-Gleason: All Ayes

COUNTY ADMINISTRATIVE OFFICE - General Services Division

S.D. #3

CA-19) Identify apparent low, responsive and responsible bid submitted by Brown & Fowler for the Pioneer Park Spray Park project, in an amount not to exceed $459,230 (1960.8543.14) (Fiscal Impact: None) - IDENTIFIED APPARENT LOW, RESPONSIVE AND RESPONSIBLE BID; AUTHORIZED GENERAL SERVICES TO PREPARE CONTRACT DOCUMENTS AND RELEASE ALL OTHER BID GUARANTEES

Perez-Gleason: All Ayes

CA-20) Request to set and advertise public hearing declaring intent to purchase a 2.87-acre portion of vacant land, APN 119-011-03, on Roberts Lane, Bakersfield, from the William E. Hines Trust to meet increased demands for fire and emergency services in the Oildale area; proposed Purchase Agreement for the acquisition; and request for cancellation of designation (Fiscal Impact: $270,000; General Fund; Not Budgeted; Discretionary) - APPROVED; ADOPTED RESOLUTION 2015-305; MADE FINDING PROJECT IS EXEMPT FROM FURTHER CEQA REVIEW PER SECTIONS 15303, 15304, 15305, 15306, 15061(B)(3) OF STATE CEQA GUIDELINES; SET HEARING FOR TUESDAY, DECEMBER 15, 2015, AT 2:00 P.M.; DIRECTED CLERK OF THE BOARD TO ADVERTISE NOTICE THREE TIMES IN ACCORDANCE WITH GOVERNMENT CODE SECTION 6063; APPROVED PURCHASE AGREEMENT; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 838-2015; AUTHORIZED AUDITOR-CONTROLLER TO MAKE SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Perez-Gleason: All Ayes

MATTERS FOR EXECUTIVE APPROVAL

CA-21) Budget Transfers - APPROVED NOS. 057 THROUGH 066

Perez-Gleason: All Ayes

CA-22) Minutes for week of September 21, 2015 - APPROVED

Perez-Gleason: All Ayes

CA-23) Miscellaneous Letters and Documents - FILED

Perez-Gleason: All Ayes

CA-24) Letters Received and Referred by Clerk of the Board - APPROVED AND FILED

Perez-Gleason: All Ayes

CA-25) Claims and Lawsuits Filed with and Referred by Clerk of the Board - APPROVED AND FILED

Perez-Gleason: All Ayes

ADJOURNED TO TUESDAY, NOVEMBER 17, 2015, AT 9:00 A.M.
Perez

/s/ Kathleen Krause
Clerk of the Board

/s/ David Couch
Chairman, Board of Supervisors

23) MISCELLANEOUS LETTERS AND DOCUMENTS - FILED

Animal Services

A) Seven thank you letters for donations to the shelter

Auditor-Controller-County Clerk

B) Report on Refunds (Government Code Section 26906) of Erroneous Deposits pursuant to Board Resolution 71-4

Clerk of the Board

C) Monthly Referral Report, October 2015

Miscellaneous

D) Letter from Congressman Kevin McCarthy and Congressman David Valadao encouraging Board to support amendment to Kern County Zoning Ordinance related to oil and gas production in Kern County (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

E) Three letters in opposition to Zone Variance (Section 19.82.020.D.7) in a C-2 District, Embree Asset Group, Inc., property at 3521 Mt. Pinos Way, Frazier Park (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

F) E-mail from Carol Bender re High Speed Rail editorial and meeting (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

G) Two e-mails requesting support of a fair contract for county employees (Copies to each Supervisor, CAO, Human Resources and County Counsel)

H) Twenty-eight e-mails in support of oil and gas industry in Kern County (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

I) E-mail from Gustavo Aguirre, Center on Race, Poverty and the Environment, re Kern Environmental Impact Report gas and oil comment letters (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

J) Letter from State Department of Conservation to McMurtrey, Hartsock and Worth, re Public Agency Acquisition of Land Enrolled in a Land Conservation Act (LCA) Contract, Buena Vista Water Storage District, Kern County (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

K) Letter from Department of Health and Human Services re National Health and Nutrition Examination Survey (NHANES) Open House/Media Day on November 10, 2015 (Copies to each Supervisor, CAO and Public Health)

L) Letter from Deborah D. Gregory, The Woman's Club of Bakersfield, re Candlelight by Christmas Dinner Theatre on December 4, 2015 (Copy to each Supervisor)

M) Notice from State Fish and Game Commission re listing the gray wolf as endangered under California Endangered Species Act

N) Notice from State Department of Alcoholic Beverage Control re application for alcoholic beverage license from: La Rosa Market, 700 Irene Street, Bakersfield; Savannah's Old Town Saloon, 20717 South Street, Unit A & B, Tehachapi; and Worldwide Market, 207 Washington Avenue, Bakersfield (Copies to Planning and Community Development and Environmental Health)

O) Notice of Petition from State Water Resources Control Board re Change of Specific Water Right Permits for the State Water Project and Central Valley Project Filed by the California Department of Water Resources and the United States Bureau of Reclamation for the California Waterfix Project and Notice of Public Hearing and Pre-Hearing Conference (Copies to each Supervisor, CAO and County Counsel)

P) Official Notice for City of Bakersfield from California Department of Food and Agriculture re Amendment to Notice of Treatment Regarding Asian Citrus Psyllid (Copies to each Supervisor, CAO, Ag Commissioner and County Counsel)

Q) Official Notice for Community of Lamont from California Department of Food and Agriculture re Notice of Treatment Regarding Asian Citrus Psyllid (Copies to each Supervisor, CAO, Ag Commissioner and County Counsel)

R) Agenda for Early Childhood Council of Kern meeting on November 4, 2015

24) <u>LETTERS RECEIVED AND REFERRED BY CLERK OF THE BOARD - APPROVED AND FILED</u>

A) Letter from Babak Naficy, Counsel for Sierra Club, to Stephen Bohlen, State Oil and Gas Supervisor, re Notice of Intent to Commence Litigation - REFERRED TO COUNTY COUNSEL (Copy to each Supervisor and CAO)

B) Letter from Ray Mellen re Mil Potrero Highway in Pine Mountain Club area - REFERRED TO PUBLIC WORKS (Copies to each Supervisor, CAO and County Counsel)

C) Letter from J.D. Cerda requesting clarification of amounts on his tax bill - REFERRED TO ASSESSOR (Copies to each Supervisor and CAO)

25) <u>CLAIMS AND LAWSUITS FILED WITH AND REFERRED BY CLERK OF THE BOARD - APPROVED AND FILED</u>

A) Claim in the matter of Rhonda Albanez v. County of Kern - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

B) Claim in the matter of Dan Klieman v. County of Kern - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

C) Claim in the matter of Claudia Phenix v. County of Kern - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

D) Claim in the matter of Tiffany Richards v. County of Kern - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

E) Report of Complaint in the matter of Eric Scharon v. County of Kern et al. - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

F) Summons and Complaint in the matter of DASA, Green River Collective, Inc. v. County of Kern (Case No. BCV-15-100868) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

G) Summons and Complaint in the matter of Mellari Fuller; and Michael Maharrey, by and through his Guardian ad Litem, Cindy Hedrick; individually and as Successors in Interest to Larry Maharrey, deceased v. County of Kern et al. (Case No. BCV-15-101201) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

H) Summons and Complaint in the matter of Nirmal Gill v. County of Kern et al. (Case No. BCV-15-101158) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

I) Summons and Complaint in the matter of Erin Gutierrez, a minor by and through her Guardian ad Litem, Desiree Camarillo v. County of Kern et al. (Case No. BCV-15-101242) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

J) Summons and First Amended and Supplemental Complaint in the matter of Shavonda Mosley and Julius Mosley v. County of Kern et al. (Case No. BCV-15-100175) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

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NOTICE OF PUBLIC HEARING BEFORE THE KERN COUNTY BOARD OF SUPERVISORS FOR CONSIDERATION OF PROPOSED 2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that on December 15, 2015, at the hour of 2:00 p.m, in the Chambers of the Board of Supervisors at the County of Kern Administrative Center, 1115 Truxtun Avenue, First Floor, Bakersfield, California, the Board of Supervisors will consider the following project:

UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT 2015 AMENDMENT

Pursuant to Public Resources Code (PRC) §41300-414160, the County has adopted a Source Reduction and Recycling Element (SRRE) for the Unincorporated County of Kern which has been approved by California's Department of Resources Recycling and Recovery (CalRecycle), formerly known as the California Integrated Waste Management Board. The Public Works Department has prepared an amendment of the SRRE to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The Unincorporated Kern County SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes.

The revision of the SRRE requires review and comment by the Kern County Local Task Force. The Local Task Force, at its regularly scheduled meeting on October 9, 2015, reviewed and concurred with the proposed 2015 amendment of the SRRE.

A revision of the SRRE is subject to environmental review. The Kern County Public Works Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program and, therefore, it is statutorily exempt from further review pursuant to Public Resources Code Section 21080(b)(15).

Copies of the proposed Unincorporated Kern County SRRE 2015 Amendment are available for inspection by interested persons during normal business hours at the Kern County Public Works Department, located at 2700 "M" Street, Suite 500, Bakersfield, California or available on our website at www.kerncountywaste.com/newsroom. Persons seeking additional information regarding this SRRE amendment should contact Aurora Rush at (661) 862-8980.

Anyone wishing to present evidence or be heard regarding this matter may appear at the hearing of the matter or any continuation thereof. If you challenge the action taken on this matter in court, you may be limited to raising only issues you or someone else raised at the public hearing described in this Notice, or in written correspondence delivered to the Board of Supervisors at, or prior to, the public hearing.

Dated: November 10, 2015

KATHLEEN KRAUSE
Clerk of the Board of Supervisors
County of Kern, State of California

Karen L Wine
Deputy Clerk

I:\CLERICAL\NOTICES\Hearing\15_SRRE NOH.docx

CLERK OF THE BOARD OF SUPERVISORS
1115 Truxtun Ave., Bakersfield CA 93301
TELEPHONE NUMBER: (661) 868-3585
FAX NUMBER: (661) 868-3636

TO: BAKERSFIELD CALIFORNIAN RECEIVING FAX NO: 395-7540

FROM: KAREN L. WINN PHONE: (661) 868-3585

NUMBER OF PAGES 3 (including coversheet) DATE: November 11, 2015

LEGAL PUBLICATION
Enclosed is a copy of a legal publication described as follows:

Notice of Public Hearing – Proposed 2015 Amendment re Source Reduction and Recycling Element
(Hearing Date: December 15, 2015)

Publication dates: **November 13, 2015**

Size of Type: 6 Point or Smaller Only

Please **proof read the notice for errors before publication** so it will not be necessary for you to republish at your own expense.

It is necessary that you furnish this office with an Affidavit of Publication as this affidavit is required by law. The Affidavit of Publication must be received in our office prior to:

November 20, 2015.

Please send the invoice and affidavit to Clerk of the Board, 1115 Truxtun Avenue, 5th Floor, Bakersfield, CA 93301. Indicate the rate and number of lines printed, and attach a copy of the printed publication to the invoice in order to identify the publication and prevent delays in payment.

Sincerely,

Kathleen Krause
Clerk of the Board

KK/kw
Attachment

Attachment 1

****
*** TX Result Report ***
****

TX complete.

Job No.	1072
Address	93957540
Name	CALIFORNIAN
Start Time	11/11 12:18 PM
Call Length	01'18
Sheets	3
Result	OK

CLERK OF THE BOARD OF SUPERVISORS
1115 Truxtun Ave., Bakersfield CA 93301
TELEPHONE NUMBER: (661) 868-3585
FAX NUMBER: (661) 868-3636

TO: BAKERSFIELD CALIFORNIAN RECEIVING FAX NO: 395-7540

FROM: KAREN L. WINN PHONE: (661) 868-3585

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November 20, 2015

Please send the invoice and affidavit to Clerk of the Board, 1115 Truxtun Avenue, 5th Floor,

15 NOV 18 PM 2:28

FILE KERN CO. CLERK OF THE BD. OF SUPERVISORS

Attachment 1

PROOF OF PUBLICATION

The BAKERSFIELD CALIFORNIAN
P.O. BOX 440
BAKERSFIELD, CA 93302

CLERK OF BOARD OF SUPERVISORS
1115 TRUXTUN AVE 5TH FL
BAKERSFIELD, CA 93301

Ad Number:	14018059	PO #:	NOPH 2015 Amei
Edition:	1TBC	Run Times	1
Class Code	Legal Notices		
Start Date	11/13/2015	Stop Date	11/13/2015
Billing Lines	53	Inches	319.84
Total Cost	$ 180.95	Account	1KCO45
Billing Address	CLERK OF BOARD OF SUPERVISOF 1115 TRUXTUN AVE 5TH FL BAKERSFIELD,CA 93301		

STATE OF CALIFORNIA
COUNTY OF KERN

I AM A CITIZEN OF THE UNITED STATES AND A RESIDENT OF THE COUNTY AFORESAID: I AM OVER THE AGE OF EIGHTEEN YEARS, AND NOT A PARTY TO OR INTERESTED IN THE ABOVE ENTITLED MATTER. I AM THE ASSISTANT PRINCIPAL CLERK OF THE PRINTER OF THE BAKERSFIELD CALIFORNIAN, A NEWSPAPER OF GENERAL CIRCULATION, PRINTED AND PUBLISHED DAILY IN THE CITY OF BAKERSFIELD COUNTY OF KERN,

AND WHICH NEWSPAPER HAS BEEN ADJUDGED A NEWSPAPER OF GENERAL CIRCULATION BY THE SUPERIOR COURT OF THE COUNTY OF KERN, STATE OF CALIFORNIA, UNDER DATE OF FEBRUARY 5, 1952, CASE NUMBER 57610; THAT THE NOTICE, OF WHICH THE ANNEXED IS A PRINTED COPY, HAS BEEN PUBLISHED IN EACH REGULAR AND ENTIRE ISSUE OF SAID NEWSPAPER
AND NOT IN ANY SUPPLEMENT THEREOF ON THE FOLLOWING DATES, TO WIT: 11/13/15

ALL IN YEAR 2015

I CERTIFY (OR DECLARE) UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

B Mentz

DATED AT BAKERSFIELD CALIFORNIA
11/13/15

Solicitor I.D.: 0

First Text
NOTICE OF PUBLIC HEARINGBEFORE THE KERN

Ad Number 14018059

NOTICE OF PUBLIC HEARING
BEFORE THE KERN COUNTY BOARD OF SUPERVISORS
FOR CONSIDERATION OF PROPOSED 2015 AMENDMENT
OF THE UNINCORPORATED KERN COUNTY
SOURCE REDUCTION AND RECYCLING ELEMENT OF THE
KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

NOTICE IS HEREBY GIVEN that on December 15, 2015, at the hour of 2:00 p.m. in the Chambers of the Board of Supervisors at the County of Kern Administrative Center, 1115 Truxtun Avenue, First Floor, Bakersfield, California, the Board of Supervisors will consider the following project:

UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT 2015 AMENDMENT

Pursuant to Public Resources Code (PRC) §41300-41160, the County has adopted a Source Reduction and Recycling Element (SRRE) for the Unincorporated County of Kern which has been approved by California's Department of Resources Recycling and Recovery (CalRecycle), formerly known as the California Integrated Waste Management Board. The Public Works Department has prepared an amendment of the SRRE to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The Unincorporated Kern County SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes.

The revision of the SRRE requires review and comment by the Kern County Local Task Force. The Local Task Force, at its regularly scheduled meeting on October 9, 2015, reviewed and concurred with the proposed 2015 amendment of the SRRE.

A revision of the SRRE is subject to environmental review. The Kern County Public Works Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program and, therefore, it is statutorily exempt from further review pursuant to Public Resources Code Section 21080(b)(15).

Copies of the proposed Unincorporated Kern County SRRE 2015 Amendment are available for inspection by interested persons during normal business hours at the Kern County Public Works Department, located at 2700 "M" Street, Suite 500, Bakersfield, California or available on our website at www.kerncountywaste.com/newsroom. Persons seeking additional information regarding this SRRE amendment should contact Aurora Rush at (661) 862-8980.

Anyone wishing to present evidence or be heard regarding this matter may appear at the hearing of the matter or any continuation thereof. If you challenge the action taken on this matter in court, you may be limited to raising only issues you or someone else raised at the public hearing described in this Notice, or in written correspondence delivered to the Board of Supervisors at, or prior to, the public hearing.

Dated: November 10, 2015

KATHLEEN KRAUSE
Clerk of the Board of Supervisors
County of Kern, State of California
/s/ Karen L. Winn, Deputy Clerk

NOVEMBER 13, 2015
14018059

KERN COUNTY
PUBLIC WORKS DEPARTMENT
CRAIG M. POPE, P.E., DIRECTOR

2700 "M" STREET, SUITE 450
BAKERSFIELD, CA 93301-2370

ADMINISTRATION & ACCOUNTING
OPERATIONS & MAINTENANCE
BUILDING & DEVELOPMENT
ENGINEERING

Phone: (661) 862-8900
FAX: (661) 862-8901
Toll Free: (800) 552-5376 Option 5
TTY Relay: (800) 735-2929

December 15, 2015

Board of Supervisors
Kern County Administrative Center
1115 Truxtun Avenue
Bakersfield, CA 93301

PUBLIC HEARING AND PROPOSED RESOLUTION TO AMEND THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN (All S.D.s)
(Fiscal Impact: None)

Pursuant to Public Resources Code (PRC) §41300-41460, the County adopted a Source Reduction and Recycling Element (SRRE) for the Unincorporated County of Kern on October 20, 1992. The 1992 SRRE described and identified programs designed to assure compliance with AB 939 to reduce the disposal of solid waste in the County unincorporated area by 25% and 50% by years 1995 and 2000, respectively.

The Public Works Department (Department) has prepared an amendment of the SRRE to update the document to ensure consistency with current regulations and with the 2013 Kern County Infrastructure Plan. The Unincorporated Kern County SRRE 2015 Amendment describes the programs, activities and efforts that have successfully achieved and maintain the mandatory waste diversion goals established by AB 939. The SRRE 2015 amendment also describes the plans and programs to comply with AB 341, Mandatory Commercial Recycling, and AB 1826, Mandatory Commercial Organic Recycling. This document contains a number of appendices that describe current and prospective programs for informational purposes.

California Code of Regulations (CCR), Title 14 §18765 requires that revisions of the SRRE be reviewed and commented upon by the Local Task Force prior to consideration by the County. The Kern County Local Task Force, at its regularly scheduled meeting on October 9, 2015, reviewed and considered the proposed amendment of the SRRE. The Local Task Force concurred with the amendment of the SRRE and directed the Department to submit the proposed amendment and Local Task Force written comments to your Board for consideration. The proposed Amendment of the SRRE and the Local Task Force written comments are attached.

CCR Title 14 §18766 requires the County to conduct a public hearing for the purpose of amending the SRRE. After considering all public comments, the County shall approve the amended SRRE by resolution prior to the submittal of the amended SRRE to the California Department of Resources Recycling and Recovery (CalRecycle) for review and approval.

A revision of the SRRE is subject to environmental review. The Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program and, therefore, it is statutorily exempt from further review pursuant to Public Resources Code Section 21080(b)(15).

CEQA Findings

1. The applicable provisions of the California Environmental Quality Act, the State CEQA Guidelines, and the Kern County Guidelines have been observed in conjunction with the hearing in consideration of this matter and all of the previous proceedings.

2. The effect upon the environment of the project, and the activities and improvements which may be carried out will not be substantial and will not interfere with maintenance of a high-quality environment now or in the future.

3. The requested action is statutorily exempt from further review pursuant to Public Resources Code Section 21080(b)(15).

The attached Resolution for approval of the Unincorporated Kern County SRRE 2015 Amendment has been reviewed by County Counsel and approved as to form. The County Administrative Office is aware of this request.

Therefore, IT IS RECOMMENDED that your Board open the public hearing to consider the proposed 2015 Amendment to the Unincorporated Kern County Source Reduction and Recycling Element of the Kern County Integrated Waste Management Plan; receive public comment; close the public hearing; make findings that the project is statutorily exempt from further environmental review under Public Resources Code Section 21080(b)(15); and adopt attached resolution approving the Amendment.

Sincerely,

Craig M. Pope
Director

U:\Common\Public Works\Board\2015\12-December\2015-12-15 AGR_ys.doc
Attachment: Amendment to SRRE
Resolution
Local Task Force Comments
cc: County Administrative Office
WMD SRRE

BEFORE THE BOARD OF SUPERVISORS
COUNTY OF KERN, STATE OF CALIFORNIA

Resolution No.: _____

In the matter of:

2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

I, KATHLEEN KRAUSE, Clerk of the Board of Supervisors of the County of Kern, State of California, hereby certify that the following Resolution, on motion by Supervisor _____, seconded by Supervisor _____, was duly and regularly adopted by the Board of Supervisors of the County of Kern at an official meeting thereof on the _____ day of _____, 2015, by the following vote and that a copy of the Resolution has been delivered to the Chairman of the Board of Supervisors.

AYES:

NOES:

ABSENT:

KATHLEEN KRAUSE
Clerk of the Board of Supervisors
County of Kern, State of California

_____
Deputy Clerk

RESOLUTION

Section 1. WHEREAS:

(a) The California Integrated Waste Management Act of 1989 (AB 939) mandated that each city and county in the State of California adopt a Source Reduction and Recycling Element as part of those jurisdictions' Countywide Integrated Waste Management Plan; and

(b) The Source Reduction and Recycling Element is to contain programs designed to reduce the generation and disposal of solid waste; and

(c) The Kern County Public Works Department (Department) prepared an Unincorporated Kern County Source Reduction and Recycling Element in 1992; and

(d) The Department has prepared an amendment of the Unincorporated Kern County Source Reduction and Recycling Element to update the Element to ensure consistency with current regulations and the 2013 Kern County Infrastructure Plan; and

(e) The amendment to the Unincorporated Kern County Source Reduction and Recycling Element is on file with the Clerk of the Board of Supervisors; and

(f) The Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program. Therefore, this matter is statutorily exempt from further review in accordance with Public Resources Code Section 21080(b)(15); and

(g) On October 9, 2015, the Kern County Local Task Force found the Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment to be adequate and to satisfy the requirements of State laws and regulations; and

(h) The Clerk of the Board has caused notice to be duly given of a public hearing in this matter in accordance with law, as evidenced by the affidavit of publication and the affidavit of mailing on file with the Clerk of the Board; and

(i) A copy of the Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment and Kern County Local Task Force comments have been on file in the Office of the Clerk of the Board, available for examination during regular business hours at all times since the date of notice in this matter; and

(j) During said hearing this Board duly considered the revisions to the Unincorporated Kern County Source Reduction and Recycling Element and the recommendations of the Department; and

(k) Said public hearing has been duly and timely conducted and before making any considerations of the proposal on its merits, this Board called for any objections or comments on said revisions of the Unincorporated Kern County Source Reduction and Recycling Element and recommendations aforementioned and all persons desiring to be heard in said matter have been duly heard, and this Board having considered all testimony presented during said public hearing, and said public hearing having been concluded;

Section 2. NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Kern, State of California, hereby finds, determines, declares, orders, and resolves as follows:

1. This Board finds the facts recited herein are true and further finds that this Board has jurisdiction to consider, approve, and adopt the subject of this Resolution.

2. This Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment as recommended by the Department and including modifications by this Board made during today's hearing is hereby **APPROVED**.

3. The findings of this Board upon which this decision is based are as follows:

(a) The applicable provision of the California Environmental Quality Act, the State CEQA Guidelines, have been duly observed in conjunction with said hearing in the consideration of this matter.

(b) This Board finds and determines that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program. Therefore, this matter is statutorily exempt from further review in accordance with Public Resources Code Section 21080(b)(15).

(c) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment contains updated program information for management of solid waste generated within the unincorporated area of the county pursuant to §41301 of the Public Resources Code.

(d) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment places primary emphasis on implementation of all feasible source reduction, recycling, and composting programs while identifying the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced at the source, recycled, or composted pursuant to §41701(e) of the Public Resources Code.

(e) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment is internally consistent and compatible with the 2013 Kern County Infrastructure Plan.

4. The Clerk of this Board shall cause copies of this Resolution to be sent to the following:

(a) California Department of Resources Recycling and Recovery (CalRecycle)
(b) County Administrative Officer
(c) Director, Public Works Department
(d) County Counsel

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SUMMARY OF PROCEEDINGS

BOARD OF SUPERVISORS - COUNTY OF KERN

1115 Truxtun Avenue
Bakersfield, California

Regular Meeting
Tuesday, December 15, 2015

2:00 P.M.

Note: Members of the Board of Supervisors may have an interest in certain contracts that the Board considers where the member holds a position on a non-profit corporation that supports the functions of the County. Supervisors are assigned to these positions as part of annual committee assignments by the Chairman of the Board. These interests include, with the Supervisor holding the position, the following: California State Association of Counties (Supervisors Perez and Gleason); Community Action Partnership of Kern (Supervisor Maggard); Kern County Network for Children (Supervisor Gleason); Kern Economic Development Corporation (Supervisors Maggard, Scrivner, and Perez); Southern California Water Committee (Supervisors Couch and Maggard); and Tobacco Funding Corporation, Kern County (Supervisors Couch and Perez).

BOARD RECONVENED

Supervisors: Gleason, Scrivner, Maggard, Couch, Perez
ROLL CALL: All Present

NOTE: The vote is displayed in bold below each item. For example, Gleason-Perez denotes Supervisor Gleason made the motion and Supervisor Perez seconded the motion.

CONSENT AGENDA/OPPORTUNITY FOR PUBLIC COMMENT: ALL ITEMS LISTED WITH A "CA" OR "C" WERE CONSIDERED TO BE ROUTINE AND APPROVED BY ONE MOTION.

BOARD ACTION SHOWN IN CAPS

REPORT ON ACTIONS TAKEN IN CLOSED SESSION ON TUESDAY, DECEMBER 15, 2015, AT 9:00 A.M. -

Item No. 49 concerning consultation with Sheriff (Government Code Section 54957(a)) - HEARD; NO REPORTABLE ACTION

Item No. 50 concerning PUBLIC EMPLOYEE PERFORMANCE EVALUATION - Titles: County Counsel, Director of Airports, Director of Planning and Community Development, and County Administrative Officer (Government Code Section 54957) - HEARD; NO REPORTABLE ACTION; COUNTY ADMINISTRATIVE OFFICER PERFORMANCE EVALUATION WAS NOT CONDUCTED

Item No. 51 concerning a CONFERENCE WITH LABOR NEGOTIATORS - Agency designated representatives: County Administrative Officer, John Nilon, and designated staff - Employee organizations: Committee of Interns and Residents - SEIU; Service Employees' International Union, Local 521 (Government Code Section 54957.6) - HEARD; NO REPORTABLE ACTION

Item No. 52 concerning a CONFERENCE WITH LABOR NEGOTIATORS - Agency designated representatives: County Counsel, Theresa Goldner, and designated staff - Unrepresented Employee: County Administrative Officer (Government Code Section 54957.6) - THIS ITEM WAS NOT HEARD

Item No. 53 concerning a CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION (Government Code Section 54956.9 (d)(1)) Name of case: County of Kern v. California High Speed Rail Authority, Sacramento County Superior Court Case No.: 34-2014-80001863 - HEARD; NO REPORTABLE ACTION

Item No. 54 concerning a CONFERENCE WITH LEGAL COUNSEL - EXISTING LITIGATION (Government Code Section 54956.9 (d)(1)) Name of case: Otis Whinery v. County of Kern Workers' Compensation Appeals Board Case No. ADJ9591787 - THE BOARD CONFERRED WITH COUNSEL AND STAFF REGARDING A WORKERS' COMPENSATION CASE FILED BY MR. WHINERY FOR ALLEGED INJURIES ARISING OUT OF HIS EMPLOYMENT WITH THE COUNTY OF KERN AS A SHERIFF'S SERGEANT WITH THE KERN COUNTY SHERIFF'S OFFICE

BY A UNANIMOUS 5-0 VOTE, THE BOARD APPROVED SETTLEMENT AUTHORITY BY WAY OF STIPULATIONS WITH REQUEST FOR AWARD CARRYING A TOTAL MONETARY VALUE OF $68,440; AUTHORIZED THE AUDITOR-CONTROLLER TO ISSUE WARRANTS AS REQUESTED BY COUNTY COUNSEL; AND AUTHORIZED COUNTY COUNSEL TO PRESENT THE PROPOSED SETTLEMENT TO THE WORKERS' COMPENSATION APPEALS BOARD AND EXECUTE ALL NECESSARY CLOSING DOCUMENTS

NOTE: County Counsel Theresa Goldner disclosed and disqualified herself from participating in the hearing of agenda item nos. 3 and 5 due to a conflict of interest, as her husband is a partner in a law firm that has done work for medical providers or plans that are impacted or may be impacted by those items. County Counsel Goldner was not present in the hearing room during consideration of those items and the Office of County Counsel was represented by Chief Deputy County Counsel Karen Barnes

PUBLIC PRESENTATIONS

1) This portion of the meeting is reserved for persons to address the Board on any matter not on this agenda but under the jurisdiction of the Board. Board members may respond briefly to statements made or questions posed. They may ask a question for clarification, make a referral to staff for factual information or request staff to report back to the Board at a later meeting. Also, the Board may take action to direct the staff to place a matter of business on a future agenda. SPEAKERS ARE LIMITED TO TWO MINUTES. PLEASE STATE AND SPELL YOUR NAME BEFORE MAKING YOUR PRESENTATION. THANK YOU!

   NO ONE HEARD

BOARD MEMBER ANNOUNCEMENTS OR REPORTS

2) On their own initiative, Board members may make an announcement or a report on their own activities. They may ask a question for clarification, make a referral to staff or take action to have staff place a matter of business on a future agenda (Gov. Code Sec. 54954.2[a][2])

   NO ONE HEARD

DEPARTMENTAL REQUEST

COUNTY ADMINISTRATIVE OFFICE - Human Resources Division

3) Proposed Amendment No. 2 to Agreement 361-2013 with Burns Consulting Associates, Inc., for network administration services for the Kern County Point of Service Plan and the Kern Legacy Health Plan, to amend the term of the agreement to expire April 30, 2016 (Fiscal Impact: $500,000 Annual Savings; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 923-2015

Scrivner-Perez: All Ayes

CA-4) Proposed Amendment No. 4 to Agreement 138-2013 with Foundation for Medical Care of Kern, for claims administration and network administration services for Kern Legacy Health Plan, to add wrap network services for out of network claims for a fee of $5.30 per employee per month and change banking fee from $1,000 or actual cost to $400 flat fee (Fiscal Impact: $38,000 FY 2015-2016; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 924-2015

Scrivner-Gleason: All Ayes

CA-5) Proposed Amendment No. 7 to Agreement 032-2008 with Managed Care Systems, LLC, to continue as the provider of third-party administrative services related to County's self-funded EPO employee and retiree medical benefit plan for a three year term, from January 1, 2016 through December 31, 2018 (Fiscal Impact: $450,000 FY 2015-2016; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 925-2015

Scrivner-Gleason: All Ayes

CA-6) Proposed Agreements with Kaiser Foundation Health Plan, Inc., containing non-standard terms and conditions, for administration of Kaiser Health Maintenance Organization fully insured health plan option for a three year term, from January 1, 2016 through December 31, 2018 (Fiscal Impact: $7,500,000 FY 2015-2016; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENTS 926-2015 THROUGH 930-2015

Scrivner-Gleason: All Ayes

CONTINUED HEARINGS

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

CA-7) **Request from Bruce Anderson to vacate portions of access easements located at Oaktree Estates Drive, north of Walker Basin (S.D. #2)**
Specific Request:
A nonsummary vacation of: (a) all of Mistletoe Court as it exists beginning at Oaktree Estates Drive then west to its terminus; (b) a portion of Oaktree Estates Drive beginning from the northern property line of Parcel 1 and Parcel 22 of Parcel Map 9782, then south to the southern property line of Parcel 6 of Parcel Map 9782, and easterly projection of the southern line in the Walker Basin area (107-3 3 098 Streets and Highways)
(Environmental Review: General Rule, Section 15061(b)(3); Published Bakersfield Californian) (from 10/20/2015; 10/27/2015; and 11/17/2015) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; PER PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT RECOMMENDATION, ADOPTED RESOLUTION 2015-333 AND RECOMMENDED FINDINGS APPROVING NONSUMMARY VACATION AS REQUESTED, EXCEPTING AND RESERVING AN EASEMENT FOR EXISTING UTILITIES, TO BE RECORDED UPON WRITTEN VERIFICATION FROM KERN COUNTY PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT TO CLERK OF THE BOARD, WHICH STATES THAT AN ACCEPTABLE PRIVATE ACCESS EASEMENT HAS BEEN RECORDED FOR THE BENEFIT OF PARCEL 1 THROUGH PARCEL 6 OF PARCEL MAP 9782 AND PARCEL 18 THROUGH PARCEL 22 OF PARCEL MAP 9782, WITH FORM AND CONTENT OF EASEMENT DOCUMENT APPROVED BY COUNTY SURVEYOR

Scrivner-Gleason: All Ayes

HEARINGS

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

CA-8) **Request from 64KT 8me, LLC to vacate portions of access easements located at Munsey Road in the Cantil area (S.D. #2)**
Specific Request:
A nonsummary vacation of a portion of Munsey Road as it exists from State Highway 14 to Chollo Street in the Cantil area (133 3 098 Streets and Highways)
(Environmental Review: General Rule, Section 15061(b)(3); Published Mojave Desert News) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; PER PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT RECOMMENDATION, ADOPTED RESOLUTION 2015-334 AND RECOMMENDED FINDINGS APPROVING NONSUMMARY VACATION, EXCEPTING AND RESERVING AN EASEMENT FOR EXISTING UTILITIES

Scrivner-Gleason: All Ayes

DEPARTMENTAL REQUESTS

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

S.D. #3

CA-9) Proposed Request for Release of Funds (RROF) and Environmental Clearance Certification for Community Development (CD) Project No. 1.15.1, Oildale Bicycle/Pedestrian Safety Street Improvements (Fiscal Impact: None) - APPROVED; AUTHORIZED CHAIRMAN TO EXECUTE RROF AND CERTIFICATION, PURSUANT TO U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD) APPLICABLE REGULATIONS; AUTHORIZED DIRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT TO SUBMIT TO HUD

Scrivner-Gleason: All Ayes

S.D.s #3 and #5

CA-10) Proposed Request for Release of Funds (RROF) and Environmental Clearance Certification for Community Development (CD) Project No. 3.15.2, East Bakersfield Bicycle/Pedestrian Safety Street Improvements (Fiscal Impact: None) - APPROVED; AUTHORIZED CHAIRMAN TO EXECUTE RROF AND CERTIFICATION, PURSUANT TO U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD) APPLICABLE REGULATIONS; AUTHORIZED DIRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT TO SUBMIT TO HUD

Scrivner-Gleason: All Ayes

S.D. #4

CA-11) Proposed Memorandum of Understanding and Agreement for Performance of Conditions of Approval and Mitigation Measures as Environmental Restrictions (MOU) with Rival Power and Energy LLC for approved Rival Power Solar Project in unincorporated Kern County, Wasco area (Fiscal Impact: None) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 931-2015

Scrivner-Gleason: All Ayes

All S.D.s

CA-12) Proposed Agreement with Bakersfield Homeless Center for Emergency Solutions Grant (ESG) Shelter Operations Component, in the amount of $90,000 (Fiscal Impact: $90,000; Federal Grant; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 932-2015

Scrivner-Gleason: All Ayes

CA-13) Proposed Agreement with Bakersfield Rescue Mission for Emergency Solutions Grant (ESG) Shelter Operations Component in the amount of $90,000 (Fiscal Impact: $90,000; Federal Grant; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 933-2015

Scrivner-Gleason: All Ayes

CA-14) Proposed Agreement with Alliance Against Family Violence and Sexual Assault for Emergency Solutions Grant (ESG) Shelter Operations Component in the amount of $21,980 (Fiscal Impact: $21,980; Federal Grant; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 934-2015

Scrivner-Gleason: All Ayes

CA-15) Proposed Agreement with Flood Bakersfield Ministries for Emergency Solutions Grant (ESG) Street Outreach Component in the amount of $8,500 (Fiscal Impact: $8,500; Federal Grant; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 935-2015

Scrivner-Gleason: All Ayes

CA-16) Proposed Agreement with Women's Center - High Desert for Emergency Solutions Grant (ESG) Shelter Operations Component in the amount of $21,980 (Fiscal Impact: $21,980; Federal Grant; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 936-2015

Scrivner-Gleason: All Ayes

PUBLIC WORKS DEPARTMENT - Administration and Accounting

S.D. #2

CA-17) Hearing regarding proposed annual update of Capital Improvement Plan and review of public information for Rosamond/Willow Springs Transportation Impact Fee Program (Fiscal Impact: None) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; RECEIVED AND FILED; ADOPTED RESOLUTION 2015-335

Scrivner-Gleason: All Ayes

CA-18) Hearing regarding proposed annual update of Capital Improvement Plan and review of public information for Tehachapi Transportation Impact Fee Program (Fiscal Impact: None) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; RECEIVED AND FILED; ADOPTED RESOLUTION 2015-336

Scrivner-Gleason: All Ayes

CA-19) Request for cancellation of designations and approval of Tehachapi Landfill gatehouse and scale project (Fiscal Impact: $650,000; Solid Waste Enterprise Fund; Not Budgeted; Discretionary) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER TO PROCESS SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Scrivner-Gleason: All Ayes

All S.D.s

20) Proposed addition of one Supervising Building Inspector-C position and deletion of one Building Inspector Specialist position to Budget Unit 8954, effective December 15, 2015 (Fiscal Impact: $62,000 [FY 2015/2016]; $9,300 Public Works Internal Service Fund, $52,700 Building Inspection Fund; Not Budgeted; Discretionary) - APPROVED; REFERRED TO HUMAN RESOURCES DIVISION TO AMEND THE DEPARTMENTAL POSITIONS AND SALARY SCHEDULE

Scrivner-Perez: All Ayes

CA-21) Hearing regarding proposed annual update of Capital Improvement Plan and review of public information for Metropolitan Bakersfield Transportation Impact Fee Program (Fiscal Impact: None) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; RECEIVED AND FILED; ADOPTED RESOLUTION 2015-337

Scrivner-Gleason: All Ayes

CA-22) Proposed Amendment No. 2 to Agreement 817-2014 with NCM Engineering Corporation to provide on-call engineering services for various County road projects, to extend term through June 30, 2017 and increase maximum compensation by $100,000 for a new not to exceed amount of $300,000 (Fiscal Impact: $100,000; Road Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 937-2015

Scrivner-Gleason: All Ayes

CA-23) Request to appropriate unanticipated revenue in the amount of $99,950 from California Department of Resources Recycling and Recovery to enhance the County's Household Hazardous Waste program including mid-year capital asset acquisition of a cardboard baler in an amount not to exceed $12,000 (Fiscal Impact: $99,950 Revenue; Solid Waste Enterprise Fund; Not Budgeted; Discretionary) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER TO PROCESS SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Scrivner-Gleason: All Ayes

CA-24) Request for approval of mid-year capital asset acquisition and sole source procurement of a Trimble S7 Total Station survey equipment from Allen Instruments and Supplies, in an amount not to exceed $39,201 (Fiscal Impact: $39,201; Road Fund; Not Budgeted; Discretionary) - APPROVED; AUTHORIZED PURCHASING AGENT TO ISSUE SOLE SOURCE PURCHASE ORDER; AUTHORIZED AUDITOR-CONTROLLER TO PROCESS SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Scrivner-Gleason: All Ayes

PUBLIC WORKS DEPARTMENT - Building and Development

MOTION TO RECONSIDER ITEM NO. 25 WHICH WAS PREVIOUSLY APPROVED ON THE CONSENT AGENDA

Scrivner-Maggard: 4 Ayes; 1 Absent - Perez

S.D. #2

25) Hearing to make a determination of public nuisance and order abatement involving removal of trash, junk and debris and clean-up of property located at 8955 Munsey Road, Cantil, APN 181-130-24 (Fiscal Impact: $20,000; General Fund; Budgeted; Discretionary) - OPENED HEARING; ROXANNE EDWARDS, REPRESENTING THE PROPERTY OWNER, HEARD; CLOSED HEARING; CONTINUED TO TUESDAY, APRIL 5, 2016, AT 2:00 P.M.

Scrivner-Gleason: 4 Ayes; 1 Absent - Perez

S.D. #4

CA-26) Request for release of Monument for Security for Tract 6252, Phase D, southwest corner of Renfro Road and Noriega Road, Bakersfield, Lennar Fresno, Inc. (Fiscal Impact: None) - RELEASED MONUMENT SECURITY BOND NO. 024051277, IN THE AMOUNT OF $8,200, UNDERWRITTEN BY LIBERTY MUTUAL INSURANCE COMPANY

Scrivner-Gleason: All Ayes

CA-27) Request for release of Faithful Performance Security Bond for street, water, sewer and landscape improvements one-year guarantee period, Tract 6214, Phase 4, northwest corner of Rudd Avenue and Meacham Road, Western Rosedale area, D.R. Horton Bay, Inc. (Fiscal Impact: None) - RELEASED FAITHFUL SECURITY BOND NO. 1004989, IN THE AMOUNT OF $45,481, ISSUED BY HANOVER INSURANCE COMPANY

Scrivner-Gleason: All Ayes

PUBLIC WORKS DEPARTMENT - Engineering

S.D. #3

CA-28) Proposed Grant Deed and Right-of-Way Contract with escrow instructions and estimated closing costs statement from Big West of California Liquidating Trust for providing 270,413 square feet of their property for the construction of the Standard Street Secondary Access Project, Bakersfield (Fiscal Impact: $265,267.10; Road Fund; Budgeted; Discretionary) - ACCEPTED DEED AND DIRECTED CLERK OF THE BOARD TO RECORD; APPROVED; AUTHORIZED CHAIRMAN TO SIGN CONTRACT AGREEMENT 938-2015; AUTHORIZED AUDITOR-CONTROLLER TO MAKE PAYMENT TO CHICAGO TITLE COMPANY IN AN AMOUNT NOT TO EXCEED $265,267.10 AND DELIVER CHECK TO PUBLIC WORKS DEPARTMENT

Scrivner-Gleason: All Ayes

29) Proposed Underpass Agreement, containing non-standard terms and conditions, Easement Agreement and Memorandum of Easement with San Joaquin Valley Railroad for construction and maintenance of the Atlas Street grade separation at San Joaquin Valley Railroad (Fiscal Impact: $87,500; Road Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED COUNTY COUNSEL AND CHAIRMAN TO SIGN AGREEMENTS 939-2015, 940-2015 AND 941-2015; AUTHORIZED AUDITOR-CONTROLLER TO MAKE PAYMENT IN AN AMOUNT NOT TO EXCEED $87,500

Maggard-Gleason: All Ayes

S.D.s #3 & #5

CA-30) Proposed Agreement with Golden Empire Transit (GET) for allocation of $500,000 of Transportation Development Act (TDA) Article 8 funds for pavement rehabilitation and Americans with Disabilities Act (ADA) improvements at various bus stop locations on Virginia Street between Oswell Street and Washington Avenue, Bakersfield, from December 15, 2015 to June 30, 2017; and request for appropriation of unanticipated revenue of $500,000 of TDA funds for subject project (Fiscal Impact: $500,000 Revenue; Road Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 942-2015; AUTHORIZED AUDITOR-CONTROLLER TO PROCESS SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Scrivner-Gleason: All Ayes

S.D.s #2, #3, #4 & #5

31) Request from City of Bakersfield for County consent for acquisition through eminent domain of properties necessary for the Centennial Corridor Project (Fiscal Impact: None) - TODD ANDERSON, REAL PROPERTY MANAGER, CITY OF BAKERSFIELD, HEARD; APPROVED

Scrivner-Maggard: 4 Ayes; 1 No - Gleason

NOTE: Supervisor Perez left the meeting prior to the vote on Item No. 32

All S.D.s

32) Response to November 17, 2015 referral regarding impacts of gas tax reduction on road funding and maintenance (Fiscal Impact: None) - HEARD PRESENTATION; NICK ORTIZ, CHIEF EXECUTIVE OFFICER, GREATER BAKERSFIELD CHAMBER OF COMMERCE, AND AHRON HAKIMI, EXECUTIVE DIRECTOR, KERN COUNCIL OF GOVERNMENTS, HEARD; RECEIVED AND FILED

Gleason-Scrivner: 4 Ayes; 1 Absent - Perez

PUBLIC WORKS DEPARTMENT - Operations and Maintenance

All S.D.s

CA-33) Public hearing and proposed Resolution to amend the Unincorporated Kern County Source Reduction and Recycling Element of the Kern County Integrated Waste Management Plan (Fiscal Impact: None) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; MADE FINDING PROJECT IS STATUTORILY EXEMPT FROM FURTHER ENVIRONMENTAL REVIEW PER PUBLIC RESOURCES CODE SECTION 21080(b)(15); ADOPTED RESOLUTION 2015-338

Scrivner-Gleason: All Ayes

COUNTY ADMINISTRATIVE OFFICE

34) Proposed formation, structure, and duties of a standing audit committee (Fiscal Impact: None) - WITHDRAWN

CA-35) Proposed Resolution supporting emergency extension of existing utility electrical power purchase agreements with biomass facilities that receive agricultural waste (Fiscal Impact: None) - APPROVED; ADOPTED RESOLUTION 2015-339; AUTHORIZED CHAIRMAN TO SIGN CORRESPONDENCE

Scrivner-Gleason: All Ayes

CA-36) Response to January 6, 2015 referral to review how the County is optimizing its fleet of vehicles (Fiscal Impact: None) - RECEIVED AND FILED

Scrivner-Gleason: All Ayes

CA-37) Proposed appointment of Kern County Foundation, Inc., Board of Directors (Fiscal Impact: None) - APPOINTED BOARD OF DIRECTORS

Scrivner-Gleason: All Ayes

CA-38) Proposed designation of County's Information Security Officer as the County's Health Insurance Portability and Accountability Act (HIPAA) Privacy and Security Officer (Fiscal Impact: None) - APPROVED

Scrivner-Gleason: All Ayes

CA-39) Proposed contribution to the Antelope Valley Board of Trade for the 2016 Antelope Valley Board of Trade Business Outlook Conference, in the amount of $5,000 (Fiscal Impact: $5,000; Budgeted; Discretionary) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER-COUNTY CLERK TO PAY

Scrivner-Gleason: All Ayes

CA-40) Continuation of local emergency due to drought conditions (Fiscal Impact: None) - APPROVED

Scrivner-Gleason: All Ayes

41) Discussion and report from California Water Service Company regarding water conservation and water rate application to the Public Utilities Commission (Fiscal Impact: None) - NO PRESENTATION HEARD; NO ACTION TAKEN

NOTE: The Board reconsidered Item No. 25 at the conclusion of Item No. 41

COUNTY ADMINISTRATIVE OFFICE - General Services Division

S.D. #1

CA-42) Proposed Amendment No. 1 to License Agreement 455-95 with Pacific Gas and Electric Company for use of a portion of inactive China Grade Sanitary Landfill for electrical transmission line maintenance, to allow for fence modifications and installation of a new access gate (Fiscal Impact: None) - MADE FINDING PROJECT IS EXEMPT FROM FURTHER CEQA REVIEW PER SECTION 15301 OF STATE CEQA GUIDELINES; APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 943-2015

Scrivner-Gleason: All Ayes

S.D. #2

CA-43) Public hearing on proposed Resolution and Ordinance granting an underground fiber optic cable franchise to Kingbird Solar A LLC and Kingbird Solar B LLC (Fiscal Impact: $1,200 Administrative Fee; $3,000 Co-Tenancy Fee; and $500 Estimated Annual Revenue; Not Budgeted; Discretionary) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; ADOPTED SECTION 15091 FINDINGS OF FACT, SECTION 15093 STATEMENT OF OVERRIDING CONSIDERATIONS AND APPROVED MITIGATION MEASURE MONITORING PROGRAM; ADOPTED RESOLUTION 2015-340; ENACTED ORDINANCE F-610

Scrivner-Gleason: All Ayes

CA-44) Public hearing on proposed Resolution and Ordinance granting a pole line transmission system and underground fiber optic cable franchise to 64KT 8ME LLC (Fiscal Impact: $1,200 Administrative Fee; $100,000 Estimated Annual Revenue; Not Budgeted; Discretionary) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; ADOPTED SECTION 15091 FINDINGS OF FACT, SECTION 15093 STATEMENT OF OVERRIDING CONSIDERATIONS AND APPROVED MITIGATION MEASURE MONITORING PROGRAM; ADOPTED RESOLUTION 2015-341; ENACTED ORDINANCE F-611

Scrivner-Gleason: All Ayes

CA-45) Public hearing on proposed Resolution and Ordinance granting a pole line transmission system and underground fiber optic cable franchise to Golden Fields Solar III LLC (Fiscal Impact: $1,200 Administrative Fee; $75,000 Estimated Annual Revenue; Not Budgeted; Discretionary) - WITHDRAWN AT REQUEST OF APPLICANT

Scrivner-Gleason: All Ayes

S.D. #3

CA-46) Plans and Specifications for the Improve Animal Services Surgical Center project (1650.7008/7004.15) (Fiscal Impact: None) - MADE FINDING PROJECT IS EXEMPT FROM FURTHER CEQA REVIEW PER SECTION 15301(a) OF STATE CEQA GUIDELINES; APPROVED; AUTHORIZED CHAIRMAN TO SIGN; AUTHORIZED GENERAL SERVICES TO PUBLISH PURSUANT TO PUBLIC CONTRACT CODE SECTION 20125; BID OPENING TO BE TUESDAY, JANUARY 26, 2016, AT 11:00 A.M.

Scrivner-Gleason: All Ayes

CA-47) Public hearing for proposed purchase of real property from the William E. Hines Trust to meet increased demands for fire and emergency services in the Oildale area, APN 119-011-13, Roberts Lane, Bakersfield (Fiscal Impact: $270,000; General Fund Budget Unit 1960-8008; Budgeted; Discretionary) - OPENED HEARING; NO ONE HEARD; CLOSED HEARING; MADE FINDING PROJECT IS EXEMPT PER SECTIONS 15303, 15304, 15305, 15306 AND 15061(B)(3) OF STATE CEQA GUIDELINES; ADOPTED RESOLUTION 2015-342; AUTHORIZED CHAIRMAN TO SIGN ESCROW DOCUMENTS AND ACCEPT GRANT DEED ON BEHALF OF COUNTY WHEN DOCUMENTS ARE AVAILABLE; AND DIRECTED AUDITOR-CONTROLLER TO ISSUE A WARRANT PAYABLE TO CHICAGO TITLE COMPANY IN THE AMOUNT OF $262,651

Scrivner-Gleason: All Ayes

S.D. #4

CA-48) Proposed Amendment No. 4 to Purchase and Sale Agreement 416-2002 with Chevron USA, Inc., for land used to mitigate "oil strategy" as defined in the Valley Floor Habitat Conservation Plan, to extend repurchase of land option term to April 1, 2017 (Fiscal Impact: None) - MADE FINDING PROJECT IS EXEMPT FROM FURTHER CEQA REVIEW PER SECTION 15301 OF STATE CEQA GUIDELINES; APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 944-2015

Scrivner-Gleason: All Ayes

All S.D.s

CA-49) Proposed Amendment No. 4 to Agreement 958-2009 with Trans-West Security Services Inc., for security guard services at County departments, to increase rates for services, which amend Attachments A, D and Exhibit B - Fee Schedule and increase the total annual compensation payable by $500,000 in an amount not to exceed $4,500,000 per agreement year (Fiscal Impact: $500,000; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 945-2015

Scrivner-Gleason: All Ayes

CA-50) Proposed Agreement with DKJ Architects, Inc., for architectural consulting services for various projects throughout Kern County, from December 15, 2015 through December 14, 2018, in an amount not to exceed $250,000 (various projects) (Fiscal Impact: $250,000; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 946-2015

Scrivner-Gleason: All Ayes

CA-51) Proposed Amendment No. 2 to Agreement 433-2015 with BSK Associates, Inc., for additional consulting services for various projects, to increase amount by $120,000 for a new total not to exceed $300,000 (various projects) (Fiscal Impact: $120,000; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 947-2015

Scrivner-Gleason: All Ayes

CA-52) Job Order Contract Project Listing Update (various projects) (Fiscal Impact: None) - MADE FINDING PROJECTS ARE EXEMPT FROM FURTHER CEQA REVIEW PER SECTION 15301 OF STATE CEQA GUIDELINES; APPROVED

Scrivner-Gleason: All Ayes

CA-53) Proposed approval of mid-year capital asset acquisitions of four replacement vehicles for Fleet Services and shifting of unused appropriations (Fiscal Impact: None) - APPROVED; AUTHORIZED AUDITOR-CONTROLLER TO PROCESS THE SPECIFIED BUDGETARY ADJUSTMENTS AND ACCOUNTING TRANSACTIONS

Scrivner-Gleason: All Ayes

COUNTY ADMINISTRATIVE OFFICE - Human Resources Division

NOTE: Supervisor Gleason left the dais prior to the vote on Item No. 54

54) Proposed reclassification of four Fiscal Support Technician positions and one Office Services Technician position to five Human Resources Specialist I/II positions in Kern Medical Center Budget Unit 8997, effective December 26, 2015 (Fiscal Impact: $21,342 Annually; KMC Enterprise Fund; Not Budgeted; Discretionary) - APPROVED; REFERRED TO HUMAN RESOURCES DIVISION TO AMEND DEPARTMENTAL POSITIONS AND SALARY SCHEDULE

Scrivner-Maggard: 3 Ayes; 2 Absent - Gleason, Perez

NOTE: Supervisor Gleason returned to the dais following the vote on Item No. 54

55) Proposed new classification of Chief Communications Officer, Salary Range 67.8 and addition of one Chief Communications Officer and deletion of one Media Services Coordinator and one Fiscal Support Supervisor in Budget Unit 1812 (Fiscal Impact: $39,688 Annual Savings; Not Budgeted; Discretionary) - APPROVED; REFERRED TO HUMAN RESOURCES DIVISION TO AMEND DEPARTMENTAL POSITIONS AND SALARY SCHEDULE

Maggard-Gleason: 4 Ayes; 1 Absent - Perez

CA-56) Proposed Agreement with WellDyneRx, Inc., for pharmacy benefits management services for Point of Service Plan and Kern Legacy Health Plan for a three year term, from January 1, 2016 through December 31, 2018, with a fee of $4.25 per employee, per month (Fiscal Impact: $150,000 FY 2015-2016; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 948-2015

Scrivner-Gleason: All Ayes

CA-57) Proposed Amendment No. 2 to Agreement 016-2011 with The Segal Company for health benefits consultant services, extending the term for one year, from January 1, 2016 through December 31, 2016, with no increase in fees (Fiscal Impact: $240,000 Annually; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 949-2015

Scrivner-Gleason: All Ayes

CA-58) Proposed Amendment No. 2 to Agreement 1145-2009 with Vision Services Plan, extending the term for three years, from January 1, 2016 through December 31, 2018, with an increase in fees from $1.02 per member per month to $1.06 per member per month (Fiscal Impact: $92,000 Annually; Group Health Internal Service Fund; Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 950-2015

Scrivner-Gleason: All Ayes

CA-59) Proposed Amendment No. 9 to Agreement 1080-2006 with Chimienti & Associates Insurance Services for voluntary benefits and KERN$FLEX administration, extending the term for one year, from January 1, 2016 through December 31, 2016 with no increase in fees (Fiscal Impact: None) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 951-2015

Scrivner-Gleason: All Ayes

CA-60) Proposed Amendment No. 2 to Agreement 837-2011 with Chimienti & Associates Insurance Services for COBRA administrative services, extending the term for one year, from January 1, 2016 through December 31, 2016, with no increase in fees (Fiscal Impact: $18,000 Annually; Group Health Internal Service Fund; Budgeted; Mandated) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 952-2015

Scrivner-Gleason: All Ayes

CA-61) Proposed Amendment No. 5 to Agreement 892-2008 with Managed Health Network, for Employee Assistance Program and Mental Health Gatekeeping Services, extending the term for one year, from January 1, 2016 through December 31, 2016, with no increase in fees (Fiscal Impact: $140,000 FY 2015-2016; Group Health Internal Service Fund; Not Budgeted; Discretionary) - APPROVED; AUTHORIZED CHAIRMAN TO SIGN AGREEMENT 953-2015

Scrivner-Gleason: All Ayes

MATTERS FOR EXECUTIVE APPROVAL

CA-62) Budget Transfers - APPROVED NOS. 088 THROUGH 095

Scrivner-Gleason: All Ayes

CA-63) Minutes for week of October 12, 2015 - APPROVED

Scrivner-Gleason: All Ayes

CA-64) Miscellaneous Letters and Documents - FILED

Scrivner-Gleason: All Ayes

CA-65) Letters Received and Referred by Clerk of the Board - APPROVED AND FILED

Scrivner-Gleason: All Ayes

CA-66) Claims and Lawsuits Filed with and Referred by Clerk of the Board - APPROVED AND FILED

Scrivner-Gleason: All Ayes

NOTE: Prior to adjournment, Chairman Couch submitted a memorandum to Board Members, County Administrative Officer, and County Counsel concerning County Goals for 2016 and thanked staff for their assistance during his term as Board Chairman

ADJOURNED TO MONDAY, JANUARY 4, 2016, AT 12:00 NOON, FOR SELECTION OF CHAIRMAN

Maggard

/s/ Kathleen Krause
Clerk of the Board

/s/ David Couch
Chairman, Board of Supervisors

64) MISCELLANEOUS LETTERS AND DOCUMENTS – FILED

Auditor-Controller-County Clerk

A) 2015/2016 County of Kern Adopted Budget

Clerk of the Board

B) Received, certified and transmitted to Recorder for recordation, as follows:

1) Tract Map 6209, Phase 3 S.D. #5
2) Tract Map 6444, Phase 7 S.D. #3
3) Tract Map 7227, Phase 1 S.D. #4

Employers' Training Resource

C) Workforce Investment Act On-the-Job Training Agreements:

1) Racin Properties, LLC DBA Classic Lube and Auto Care WIA/WIOA Title 201, dated September 28, 2015
2) Thomas Anthony McGill DBA Source One Payment Systems, WIA/WIOA Title 201, dated October 19, 2015
3) Larry M Cho, M.D., Inc., DBA, the Industrial Medical Group, WIA/WIOA Title 201, dated October 28, 2015

Grand Jury

D) 2015-2016 Grand Jury Final Report concerning Kern County General Services, KGOV-TV (Copies to each Supervisor, CAO and General Services)

E) 2015-2016 Grand Jury Final Report concerning Kern County Sheriff's Office, Central Receiving Facility (Copies to each Supervisor, CAO and Sheriff)

F) 2015-2016 Grand Jury Final Report concerning Kern County Sheriff's Office, Lerdo Facility (Copies to each Supervisor, CAO and Sheriff)

Local Agency Formation Commission (LAFCo)

G) Report and Recommendation, Proceeding No. 1680 in the matter of City of Bakersfield: Annexation No. 653 (Chevalier No. 3) (Copies to Planning and Community Development and Environmental Health)

Public Works Department

H) Recorded Irrevocable Offer to Dedicate Real Property from HRES Boron, LLC, donated for construction of road improvements on Gardiner Avenue and Nudgent Street (Document No. 0215155791)

Treasurer-Tax Collector

I) Cash Receipts and Disbursements for November 2015

Miscellaneous

J) Worker Adjustment Retraining and Notification Act (WARN) notice from C & J Wells Services, Inc., re layoffs at administrative office at 7515 Rosedale Highway, Bakersfield (Copies to each Supervisor, CAO, Employers' Training Resource, Human Resources and County Counsel)

K) Worker Adjustment Retraining and Notification Act (WARN) notice from KVS Transportation, Inc., re layoffs at administrative office at 3752 Allen Road, Bakersfield (Copies to each Supervisor, CAO, Employers' Training Resource, Human Resources and County Counsel)

L) Twenty-three e-mails re Kern First proposal (Copies to each Supervisor, CAO, Human Resources and County Counsel)

M) E-mail from Johann Schrell re comments on EIR for revisions to Kern County Zoning Ordinance concerning oil and gas (Copies to each Supervisor, CAO, Planning and Community Development and County Counsel)

N) E-mail from Ben Nelson, Bureau of Reclamation, re error in Appendix 6E of Final Environmental Impact Statement for Coordinated Long-term Operation of Central Valley Project and State Water Project (Copies to each Supervisor, CAO and County Counsel)

O) Agenda for Kern Health Systems Regular Meeting of the Board of Directors on December 10, 2015

P) Summary of Kern Health Systems Board of Directors meeting on November 12, 2015

65) <u>LETTERS RECEIVED AND REFERRED BY CLERK OF THE BOARD - APPROVED AND FILED</u>

A) Letter from Law Offices of Kyle W. Jones re Katrina Ann Manko, Notice of Intention to Sue - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

66) <u>CLAIMS AND LAWSUITS FILED WITH AND REFERRED BY CLERK OF THE BOARD - APPROVED AND FILED</u>

A) Claim in the matter of Audrey Burns/Joe Burns v. County of Kern - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

B) Notice of Filing of Discrimination Complaint in the matter of Andrea Nonini v. Kern County Probation Department - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

C) Order Setting Mandatory Scheduling Conference in the matter of Anthony Weston Smith v. Donny Youngblood, et al. (U.S. District Court Eastern District of California, Case No. 1:15-CV-01749 - JLT) REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

D) Summons and Complaint in the matter of Rodney Jackson, an Incapacitated Adult, by and Through his Guardian ad Litem, Johnnie Jackson v. County of Kern et al. (Case No. BCV-15-101497) REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

E) Summons and Complaint in the matter of R. Rex Parris Law Firm v. County of Kern et al. (Case No. BCV-15-101596) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

F) Summons and Complaint in the matter of Livia Salas, individually and as successor-in-interest to Jose Manuel Beltran, deceased; Jose Beltran, individually and as successor-in-interest to Jose Manuel Beltran deceased v. Delano Union School District et al. (Case No. BCV-15-101458) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

G) Summons and Complaint in the matter of Anthony Weston Smith v. Donny Youngblood et al. (U.S. District Court, Eastern District of California, Case No. 1:15-CV-01749 -JLT) REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

H) Summons and Complaint in the matter of Victor Smith, Lois Smith v. County of Kern et al. (Case No. BCV-15-100834) - REFERRED TO COUNTY COUNSEL (Copy to Risk Management)

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BEFORE THE BOARD OF SUPERVISORS
COUNTY OF KERN, STATE OF CALIFORNIA

Resolution No.: 2015-338

In the matter of:

2015 AMENDMENT OF THE UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT OF THE KERN COUNTY INTEGRATED WASTE MANAGEMENT PLAN

I, KATHLEEN KRAUSE, Clerk of the Board of Supervisors of the County of Kern, State of California, hereby certify that the following Resolution, on motion by Supervisor Scrivner, seconded by Supervisor Gleason, was duly and regularly adopted by the Board of Supervisors of the County of Kern at an official meeting thereof on the 15th day of December, 2015, by the following vote and that a copy of the Resolution has been delivered to the Chairman of the Board of Supervisors.

AYES: Gleason, Scrivner, Maggard, Couch, Perez
NOES: None
ABSENT: None

KATHLEEN KRAUSE
Clerk of the Board of Supervisors
County of Kern, State of California

Karen L Winn
Deputy Clerk

BOARD OF SUPERVISORS KERN COUNTY, CA

RESOLUTION

Section 1. WHEREAS:

(a) The California Integrated Waste Management Act of 1989 (AB 939) mandated that each city and county in the State of California adopt a Source Reduction and Recycling Element as part of those jurisdictions' Countywide Integrated Waste Management Plan; and

(b) The Source Reduction and Recycling Element is to contain programs designed to reduce the generation and disposal of solid waste; and

(c) The Kern County Public Works Department (Department) prepared an Unincorporated Kern County Source Reduction and Recycling Element in 1992; and

(d) The Department has prepared an amendment of the Unincorporated Kern County Source Reduction and Recycling Element to update the Element to ensure consistency with current regulations and the 2013 Kern County Infrastructure Plan; and

(e) The amendment to the Unincorporated Kern County Source Reduction and Recycling Element is on file with the Clerk of the Board of Supervisors; and

(f) The Department has reviewed the requested action in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program. Therefore, this matter is statutorily exempt from further review in accordance with Public Resources Code Section 21080(b)(15); and

(g) On October 9, 2015, the Kern County Local Task Force found the Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment to be adequate and to satisfy the requirements of State laws and regulations; and

(h) The Clerk of the Board has caused notice to be duly given of a public hearing in this matter in accordance with law, as evidenced by the affidavit of publication and the affidavit of mailing on file with the Clerk of the Board; and

(i) A copy of the Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment and Kern County Local Task Force comments have been on file in the Office of the Clerk of the Board, available for examination during regular business hours at all times since the date of notice in this matter; and

(j) During said hearing this Board duly considered the revisions to the Unincorporated Kern County Source Reduction and Recycling Element and the recommendations of the Department; and

(k) Said public hearing has been duly and timely conducted and before making any considerations of the proposal on its merits, this Board called for any objections or comments on said revisions of the Unincorporated Kern County Source Reduction and Recycling Element and recommendations aforementioned and all persons desiring to be heard in said matter have been duly heard, and this Board having considered all testimony presented during said public hearing, and said public hearing having been concluded;

Section 2. NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the County of Kern, State of California, hereby finds, determines, declares, orders, and resolves as follows:

1. This Board finds the facts recited herein are true and further finds that this Board has jurisdiction to consider, approve, and adopt the subject of this Resolution.

2. This Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment as recommended by the Department and including modifications by this Board made during today's hearing is hereby **APPROVED**.

3. The findings of this Board upon which this decision is based are as follows:

(a) The applicable provision of the California Environmental Quality Act, the State CEQA Guidelines, have been duly observed in conjunction with said hearing in the consideration of this matter.

(b) This Board finds and determines that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program. Therefore, this matter is statutorily exempt from further review in accordance with Public Resources Code Section 21080(b)(15).

(c) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment contains updated program information for management of solid waste generated within the unincorporated area of the county pursuant to §41301 of the Public Resources Code.

(d) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment places primary emphasis on implementation of all feasible source reduction, recycling, and composting programs while identifying the amount of landfill and transformation capacity that will be needed for solid waste which cannot be reduced at the source, recycled, or composted pursuant to §41701(e) of the Public Resources Code.

(e) The Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment is internally consistent and compatible with the 2013 Kern County Infrastructure Plan.

4. The Clerk of this Board shall cause copies of this Resolution to be sent to the following:

(a) California Department of Resources Recycling and Recovery (CalRecycle)
(b) County Administrative Officer
(c) Director, Public Works Department
(d) County Counsel

U:\Common\Public Works\Resos-Ords\2015\15_Dec15 SRRE.docx

COPIES FURNISHED:
See above
12/17/2015

Attachment 1

CEQA
Transmittal Memorandum

The attached CEQA document is to be filed with the County Clerk (5 copies of the document are provided.)

LEAD AGENCY: **KERN COUNTY PUBLIC WORKS DEPARTMENT**

PROJECT TITLE: **Unincorporated Kern County Source Reduction and Recycling Element**

APPLICANT: **KERN COUNTY PUBLIC WORKS DEPARTMENT**

FILED
KERN COUNTY
DEC 18 2015
MARY J. BEDARD
AUDITOR CONTROLLER-COUNTY CLERK
BY _____ DEPUTY

PHONE NUMBER: **(661) 862-8850**

ADDRESS: **2700 M Street, Suite #400, Bakersfield, CA 93301**

☑ **30-Day Posting** ☐ 35-Day Posting ☐ 45-Day Posting

CONTACT PERSON: **YOLANDA ALCANTAR** PHONE NUMBER: **(661) 862-5292**

CHECK DOCUMENT BEING FILED:

NO FEE REQUIRED		
☐ Notice of Availability	☐ Notice of Preparation	☐ Notice of Public Hearing
☐ Notice of Intent	☐ Other Notice _____	

ENVIRONMENTAL IMPACT REPORT (EIR).....	$3069.75
☐ Previously Paid (must attach receipt)	Receipt #
☐ DFG No Effect Determination (F&G letter must be attached)	No Fee
☐ County Administrative Fee	$50.00
TOTAL $	_____

MITIGATED NEGATIVE DECLARATION.....	$2210.00
☐ Previously Paid (must attach receipt)	Receipt #
☐ DFG No Effect Determination (F&G letter must be attached)	No Fee
☐ County Administrative Fee	$50.00
TOTAL $	_____

NOTICE OF EXEMPTION.....	NO FEE
☑ County Administrative Fee	$50.00
TOTAL	**$50.00**

PAYMENT METHOD:

☑ **JV:** Fund: 35050, Department 8999, Expense Key 7546

*Return additional copies via Interoffice Mail to Clerk of the Board, Public Works, County Counsel

4751

RECEIVED WITH FEE
RECEIPT# 15131762

Attachment 1

FILED
KERN COUNTY

DEC 18 2015

MARY B. BEDARD
AUDITOR CONTROLLER-COUNTY CLERK
BY _____ DEPUTY

NOTICE OF EXEMPTION

(CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970 – CEQA)

TO WHOM IT MAY CONCERN:

1. The Board of Supervisors of the County of Kern has approved the following project in the County of Kern, State of California:

   a. Applicant or sponsoring Agency or Department:
   Kern County Public Works Department

   b. Name of Project:
   Unincorporated Kern County Source Reduction and Recycling Element 2015 Amendment.

   c. Street Address/Cross-Street of Project:
   All areas within the County of Kern.

   Map of Project (if no street address): **Attached**

   d. Description of Project:
   The Kern County Public Works Department proposes to revise the Source Reduction and Recycling Element which contains updated programs designed to reduce generation and disposal of solid waste and to ensure consistency with the 2013 Kern County Infrastructure Plan.

2. Approval – Summary of Proceedings:

   Adoption Date: **December 15, 2015** Item No. **33** ☐ A.M. ☒ P.M.

3. The Kern County Board of Supervisors has determined that this action was reviewed in accordance with the California Environmental Quality Act (CEQA) and determined that the purpose of this Plan is a local action implementing state regulation pursuant to a state-certified regulatory program. Therefore, this matter is statutorily exempt from further review in accordance with Public Resources Code Section 21080(b)(15).

This Notice of Exemption is filed on **December 18**, **2015**.

Public Works Department

Craig Pope, Director

Telephone No. 661-862-8900
General Rule

U:\Common\Public Works\Notices\2015_12-15_SRRE.docx

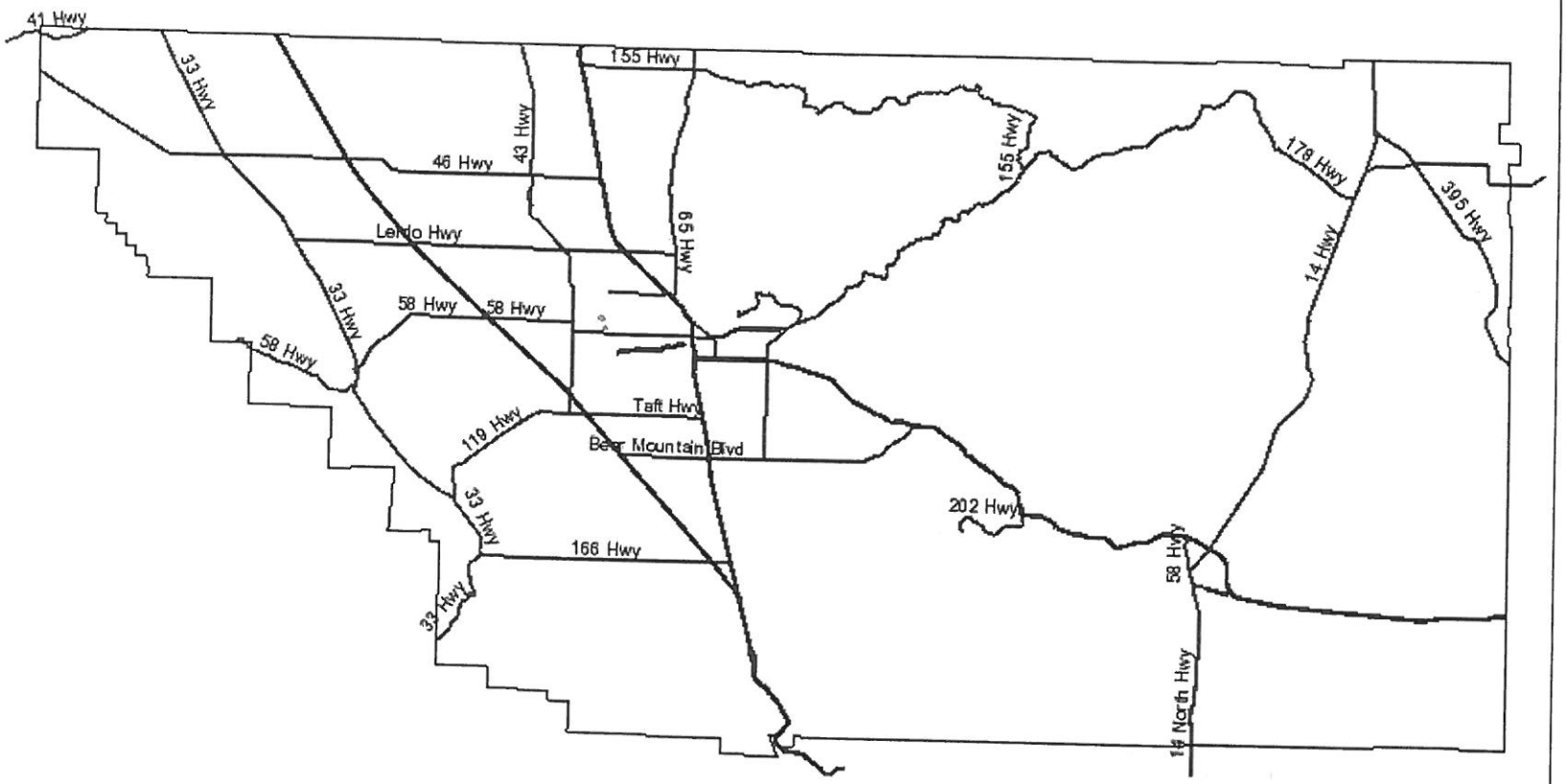
Notice of Environmental Document
Posted by County Clerk on 12/18/15
and for 30 days thereafter, Pursuant to
Section 21152(C), Public Resources Code

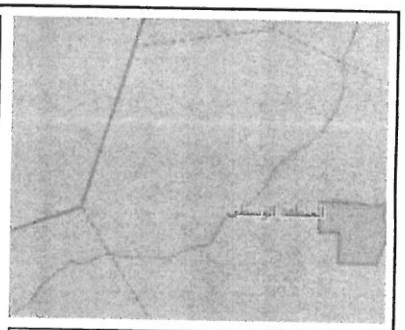
4751

Attachment 1

Kern County
Online Mapping System

County of Kern Map





Legend

- County Boundary
- Roads>500k
  - Freeway
  - Highway

1: 1,149,251

36.3 0 18.14 36.3 Miles

NAD_1983_StatePlane_California_V_FIPS_0405_Feet

© Latitude Geographics Group Ltd.

This map is a user generated static output from an Internet mapping site and is for general reference only. The County of Kern assumes no liability for damages, incurred by the user of this information, which occur directly or indirectly as a result of errors, omissions or discrepancies in the information.

Notes

Add notes here

Attachment 1

State of California-Natural Resources Agency
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
2015 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT# 15131762

STATE CLEARING HOUSE # *(if applicable)*

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY KERN COUNTY PUBLIC WORKS DEPARTMENT	DATE 12/18/2015
COUNTY/STATE AGENCY OF FILING Kern	DOCUMENT NUMBER 4751

PROJECT TITLE
UNINCORPORATED KERN COUNTY SOURCE REDUCTION AND RECYCLING ELEMENT

PROJECT APPLICANT NAME KERN COUNTY PLUBLIC WORKS DEPARTMENT			PHONE NUMBER (661) 862-8850
PROJECT APPLICANT ADDRESS 2700 M STREET SUITE 400	CITY BAKERSFIELD	STATE CA	ZIP CODE 93301

PROJECT APPLICANT *(Check appropriate box)*

☒ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$3,069.75	$	
☐ Mitigated/Negative Declaration (MND)(ND)	$2,210.00	$	0.00
☐ Application Fee Water Diversion *(State Water Resources Control Board only)*	$850.00	$	0.00
☐ Projects Subject to Certified Regulatory Programs (CRP)	$1,043.75	$	
☒ County Administrative Fee	$50.00	$	50.00
☐ Project that is exempt from fees			
☒ Notice of Exemption (attach)			
☐ CDFW No Effect Determination (attach)			
☐ Other		$	

PAYMENT METHOD:

☐ Cash ☐ Credit ☐ Check ☒ Other JV

TOTAL RECEIVED $ 50.00

SIGNATURE X M Dominguez	PRINTED NAME AND TITLE M. DOMINGUEZ, OST

ORIGINAL - PROJECT APPLICANT COPY - CDFW/ASB COPY - LEAD AGENCY COPY - COUNTY CLERK FG 753 5a (Rev 12/14)

Attachment 1

SEQUENCE: 529729

COUNTY OF KERN

JV:

FISCAL YEAR: 15-16

INTER-FUND

TOTAL: $100.00

DESCRIPTION: CEQA 4751 NOE KC PUBLIC WORKS

TRANS CODE	FUND	FUND NAME	DEPT	DIV	REV/EXP	PY	AMOUNT	MEMO
From:								
1602	35050	SOLID WASTE MGMT ENTERPRISE FD	8999		7546		$50.00	
To:								
3601	00343	COUNTY CLERKS CLEARING	2116		4681		$50.00	

EXPLANATION OF PURPOSE AND AUTHORITY THEREFOR:

CEQA 4751 NOTICE OF EXEMPTION KC PUBLIC WORKS DEPARTMENT
UNINCORPORATED KERN COUNJTY SOURCE REDUCTION AND RECYCLING ELEMENT

REFERENCE:

PREPARED BY: MONICA DOMINGUEZ DEPT: 2116 DATE: 12/18/2015 PROCESSED DATE:

Kern County
Clerks Office
1115 Truxtun Ave
Bakersfield CA 93301
661-868-3588

CEQA
County Clerk
Fee
#4751 1 @ $50.000
$50.00

Total **$50.00**

JV #529729 $50.00

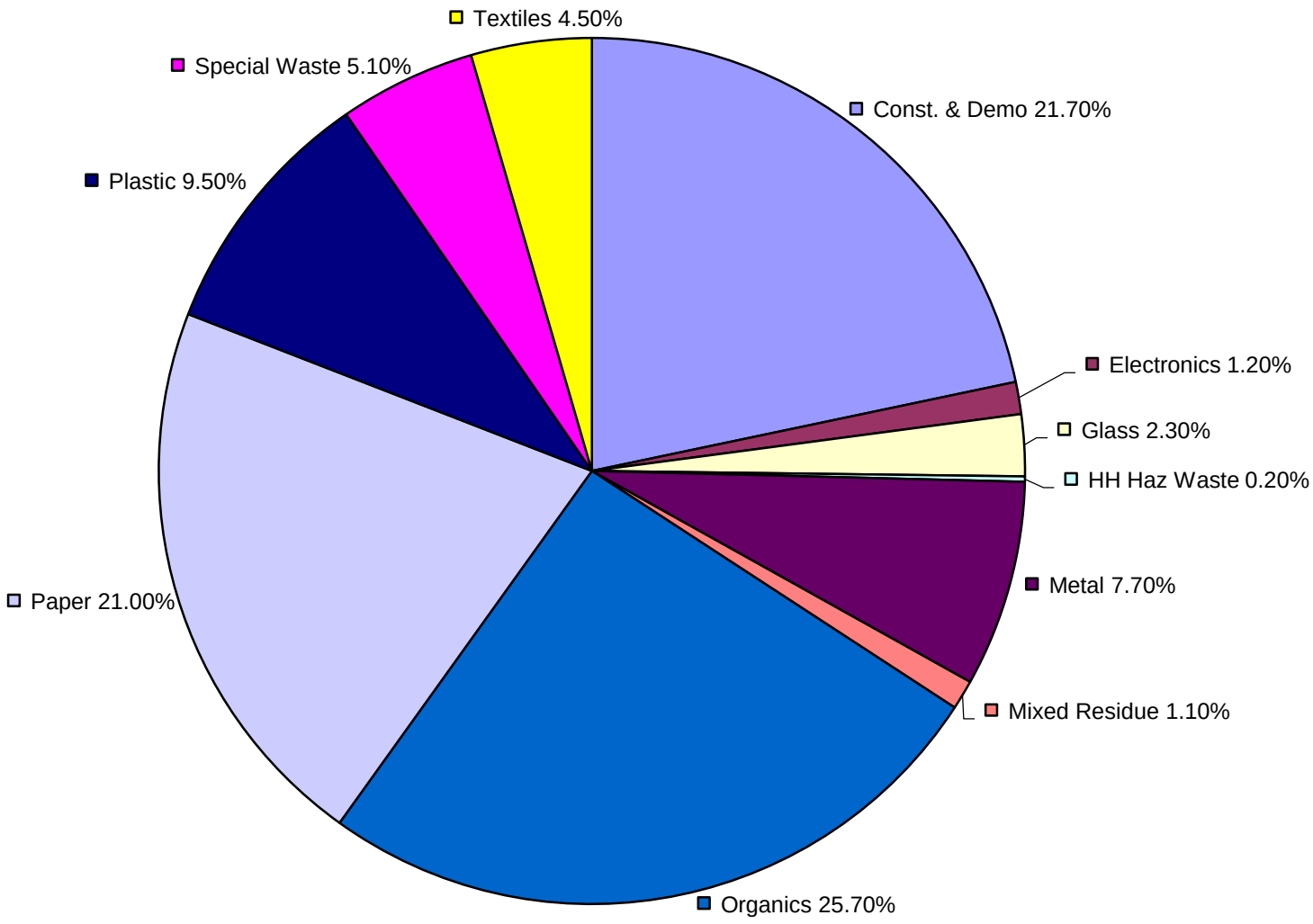
Change $0.00

ORDER NO: 112975
WALK-IN
12/18/2015 2:25:02 PM
BAKERSFIELD
MONICA DOMINGUEZ

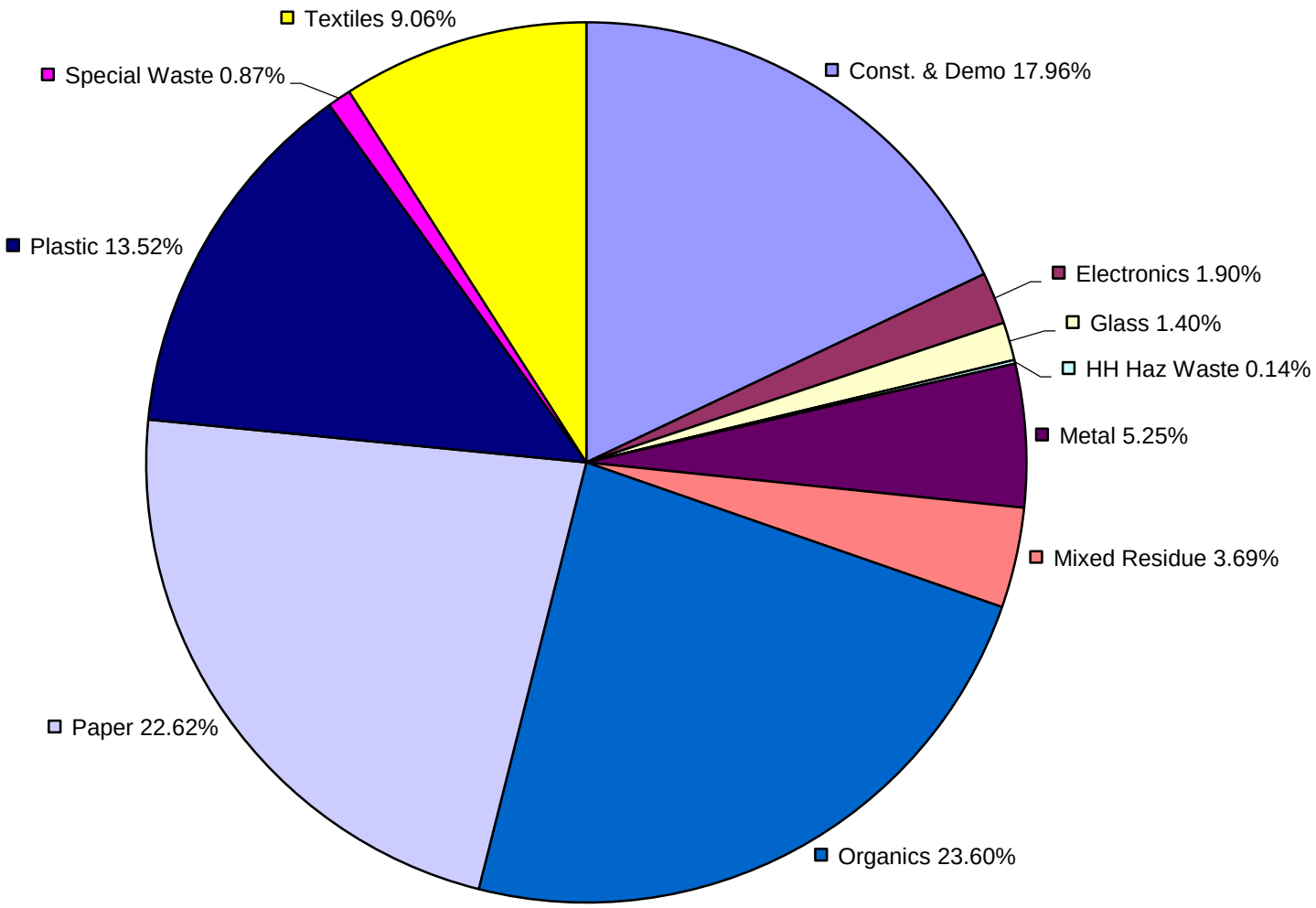
Appendix H

Key Waste Stream Characterization Results

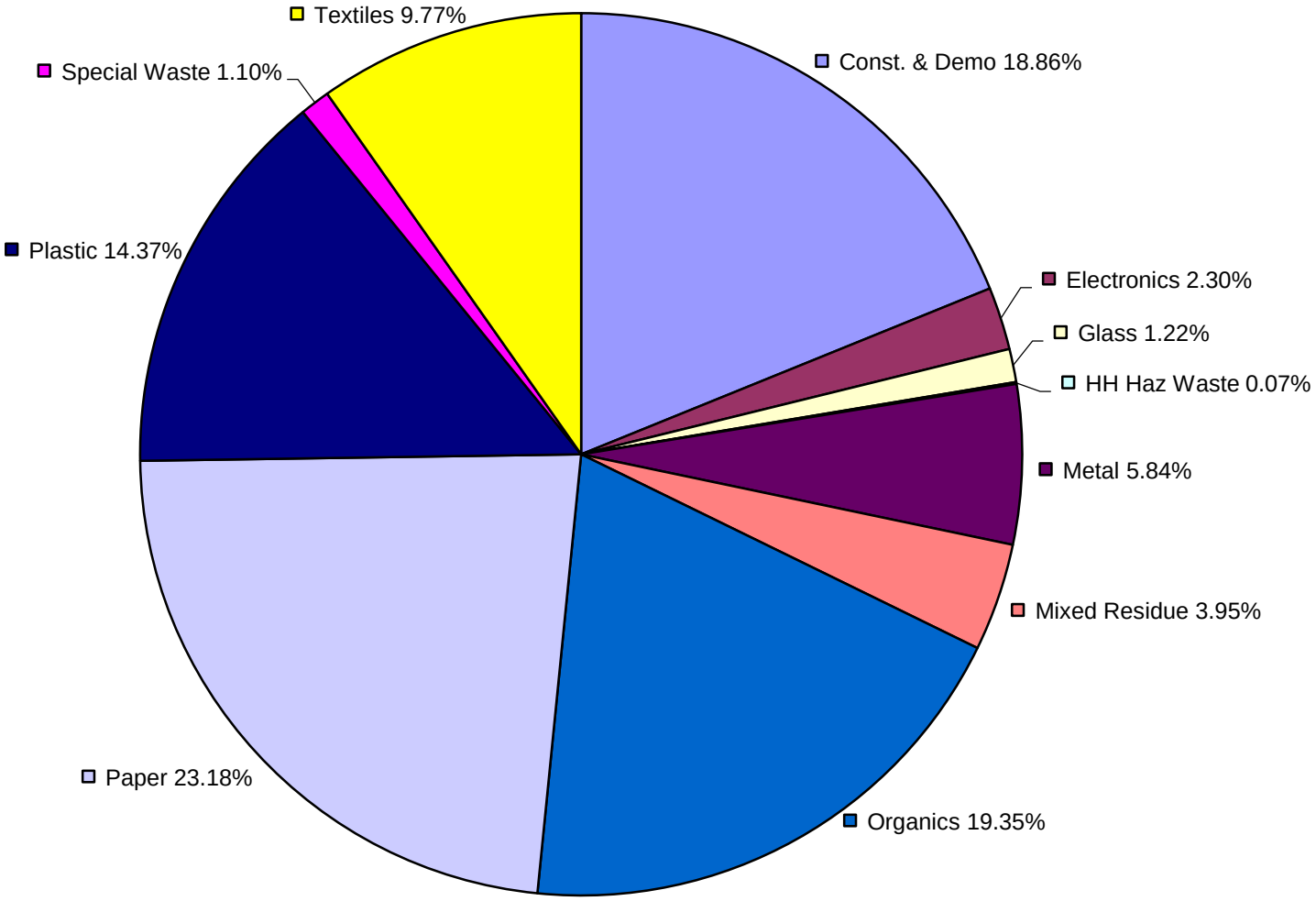
California


Textiles 4.50%
Special Waste 5.10%
Const. & Demo 21.70%
Plastic 9.50%
Electronics 1.20%
Glass 2.30%
HH Haz Waste 0.20%
Metal 7.70%
Paper 21.00%
Mixed Residue 1.10%
Organics 25.70%

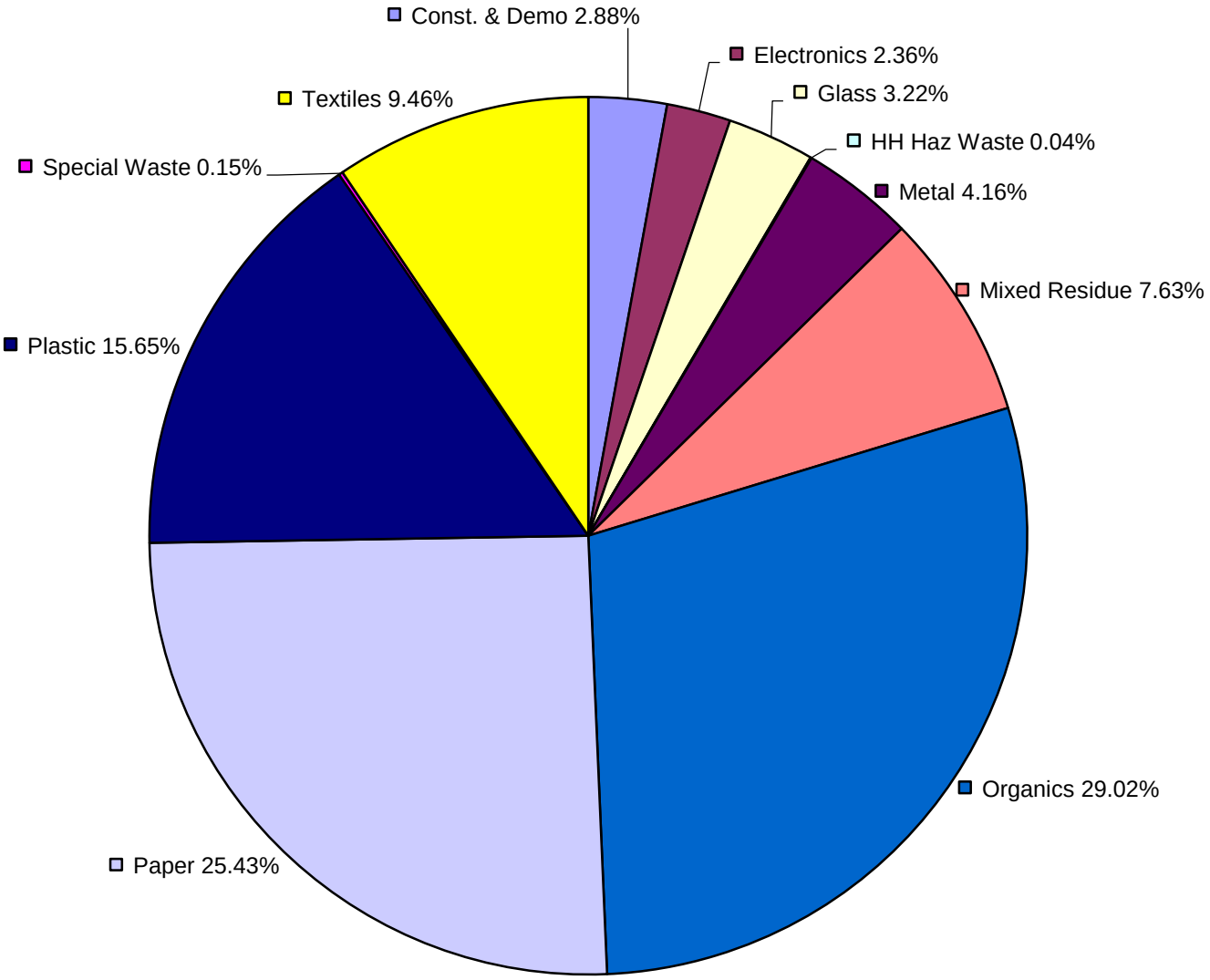
Kern County


Textiles 9.06%
Special Waste 0.87%
Const. & Demo 17.96%
Plastic 13.52%
Electronics 1.90%
Glass 1.40%
HH Haz Waste 0.14%
Metal 5.25%
Mixed Residue 3.69%
Paper 22.62%
Organics 23.60%

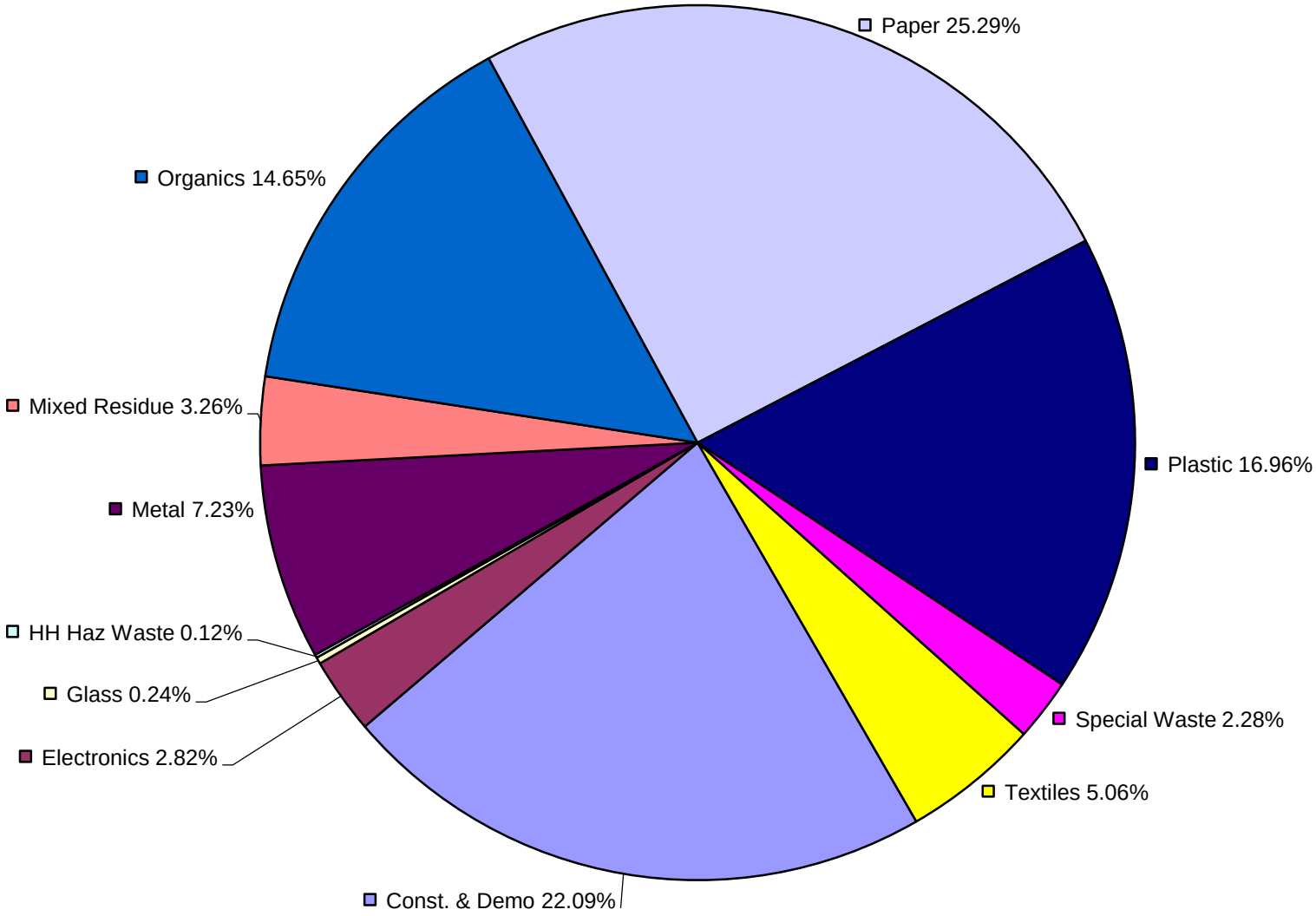
Bena Overall



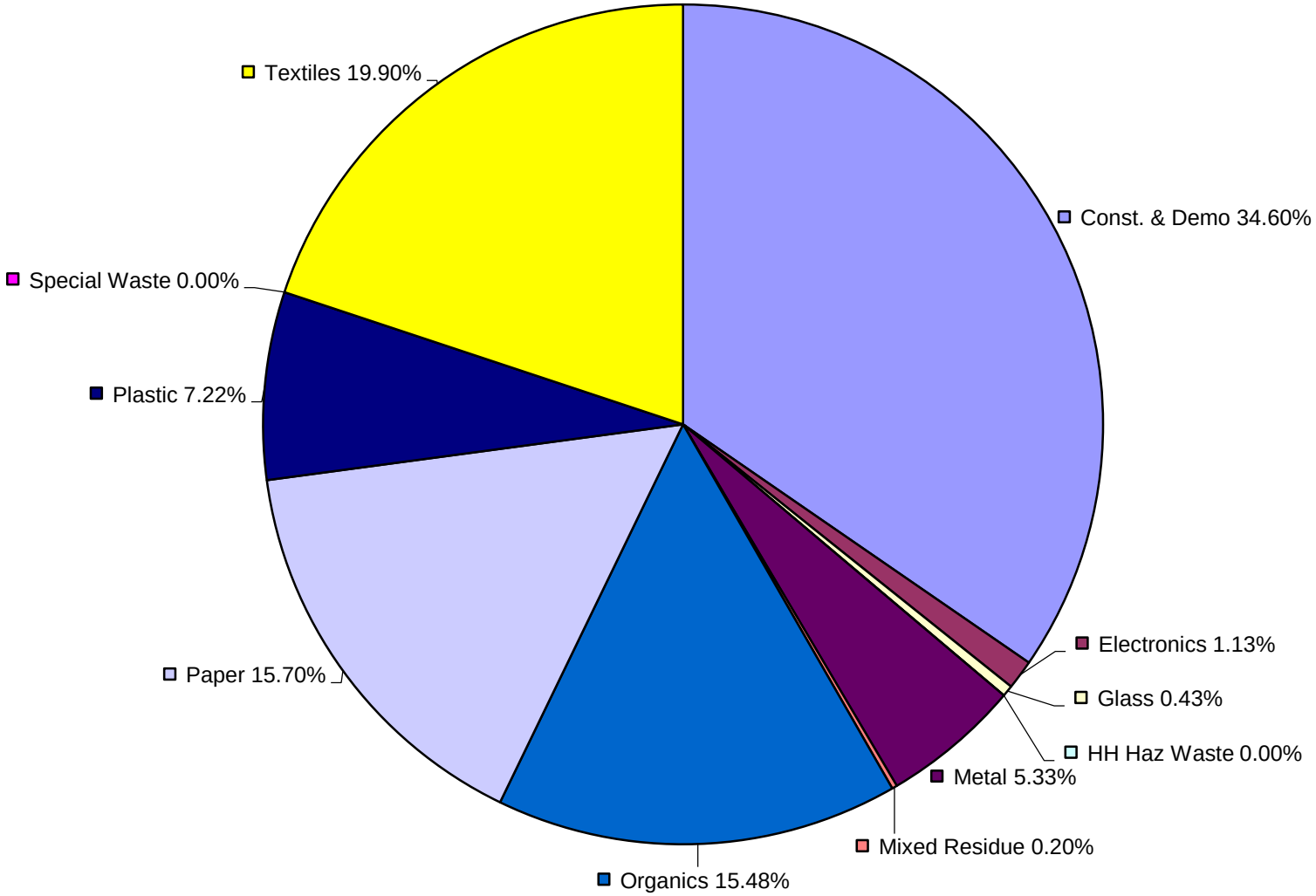
Bena Residential



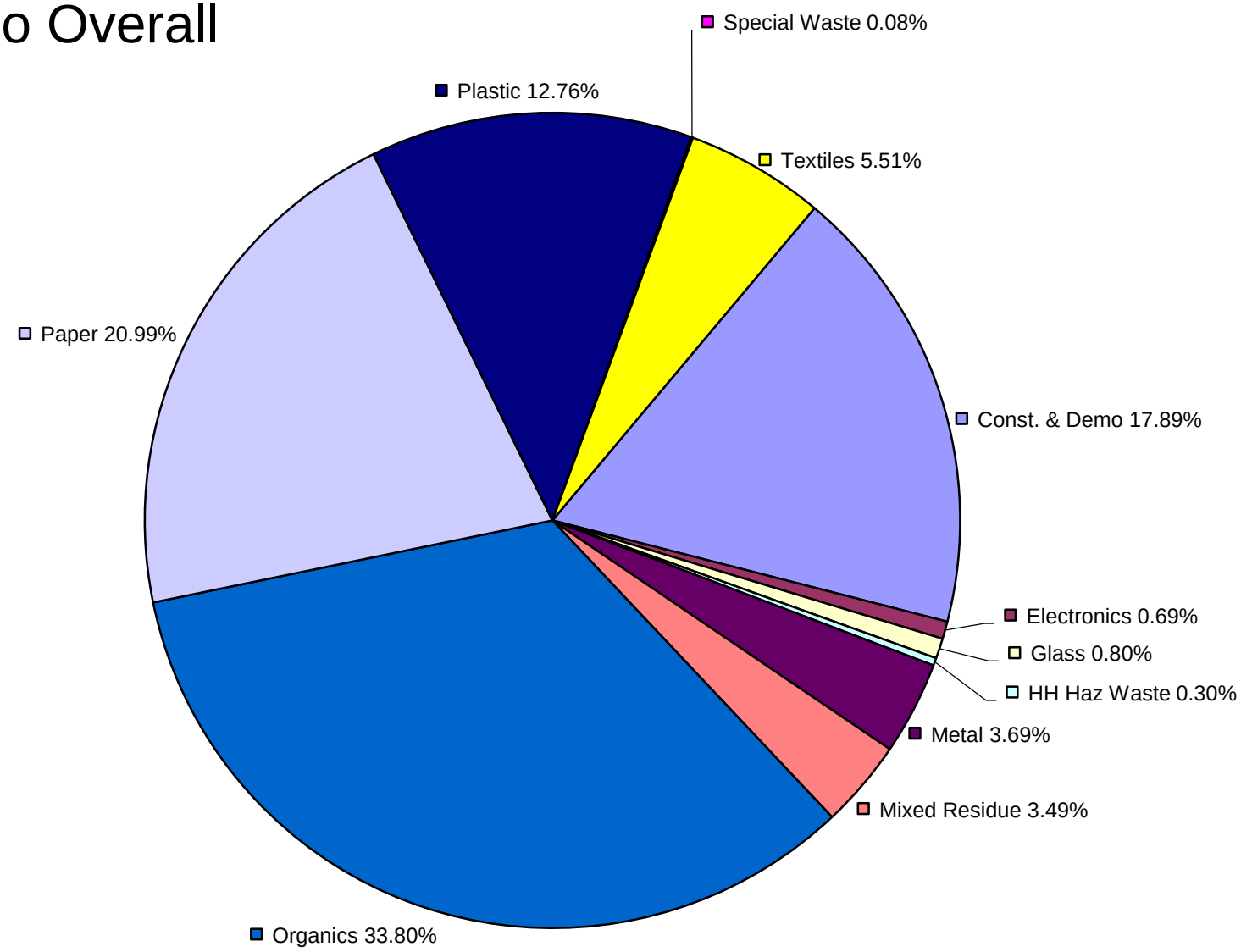
Bena Commercial



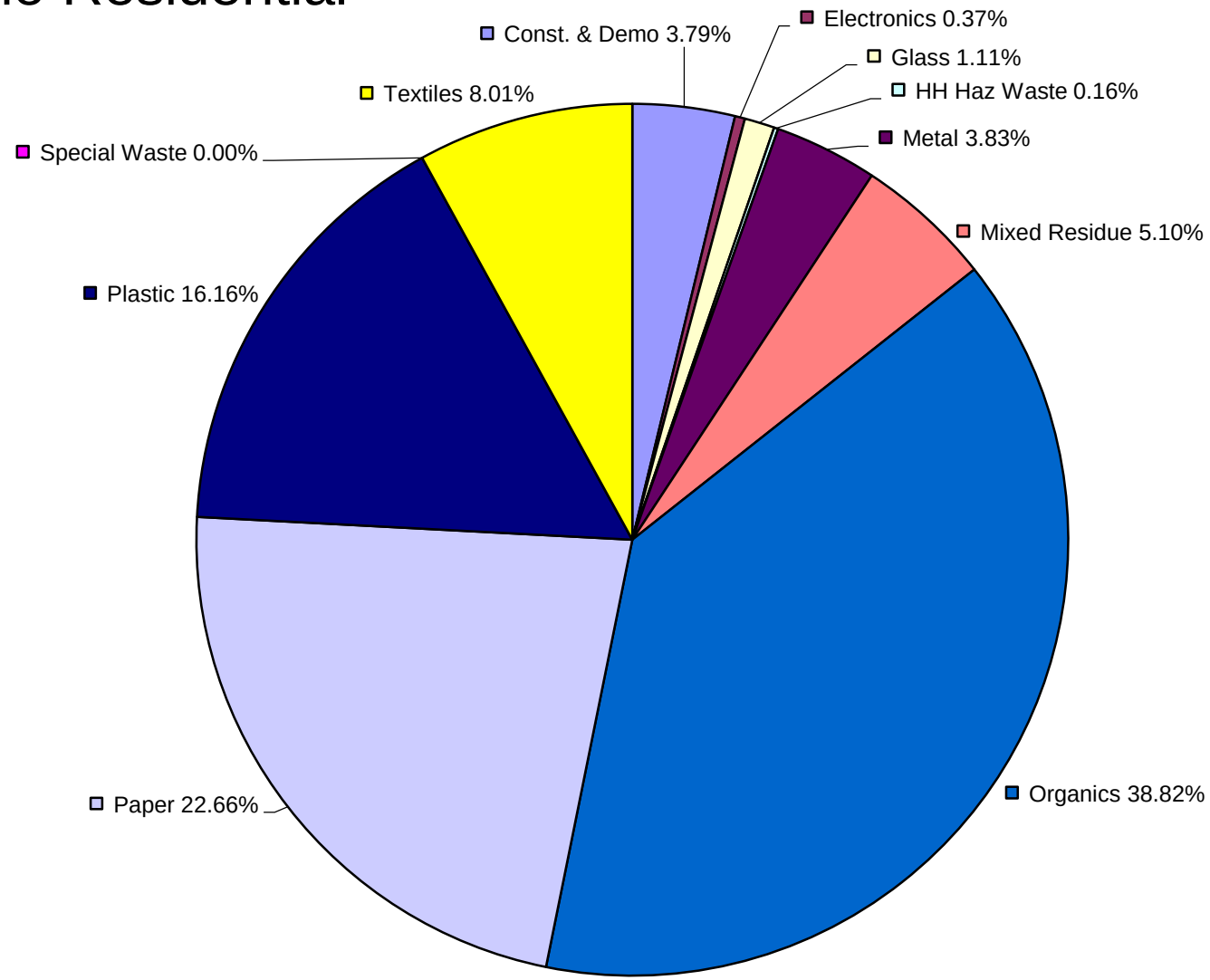
Bena Self-Haul



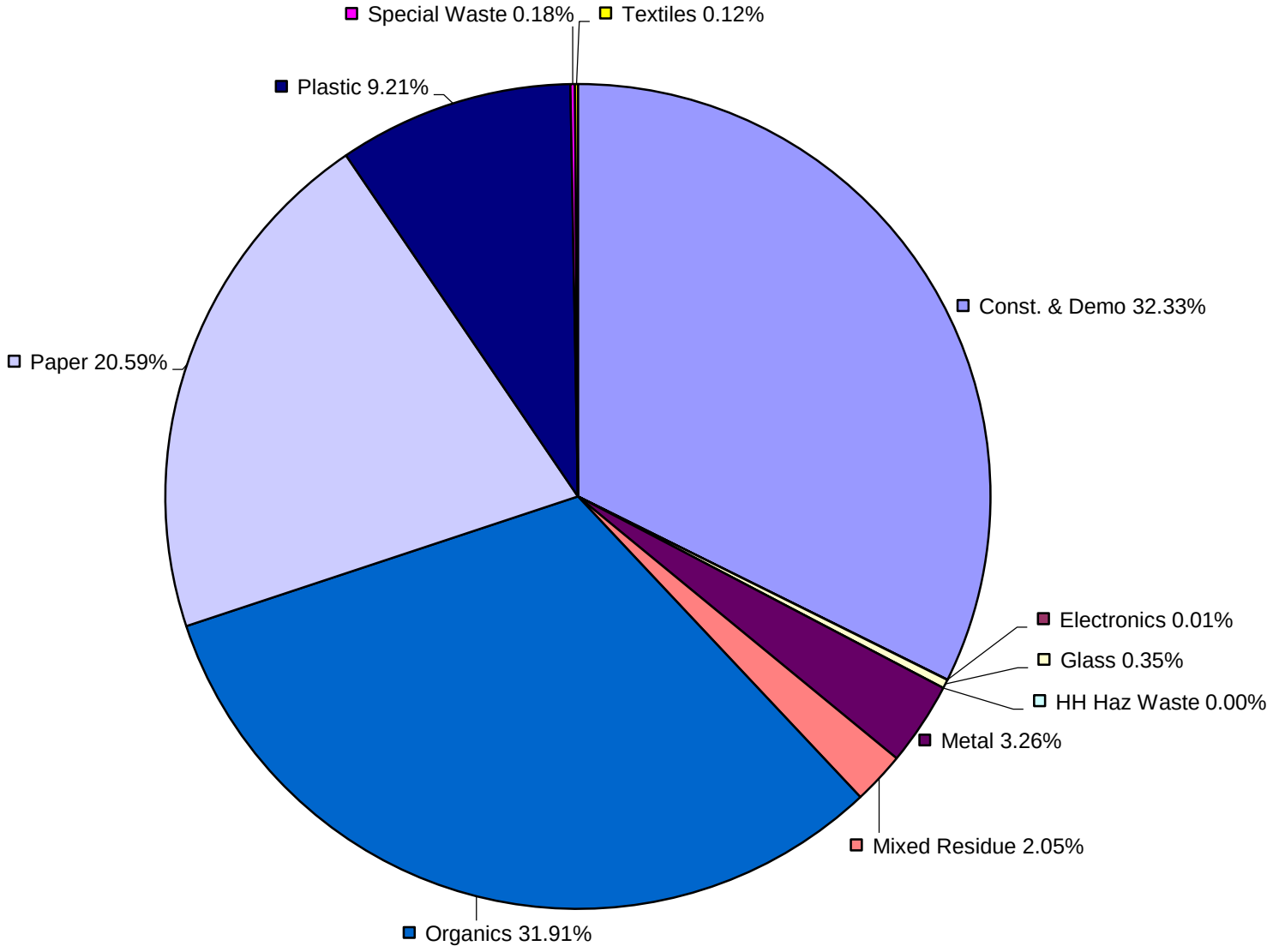
Delano Overall



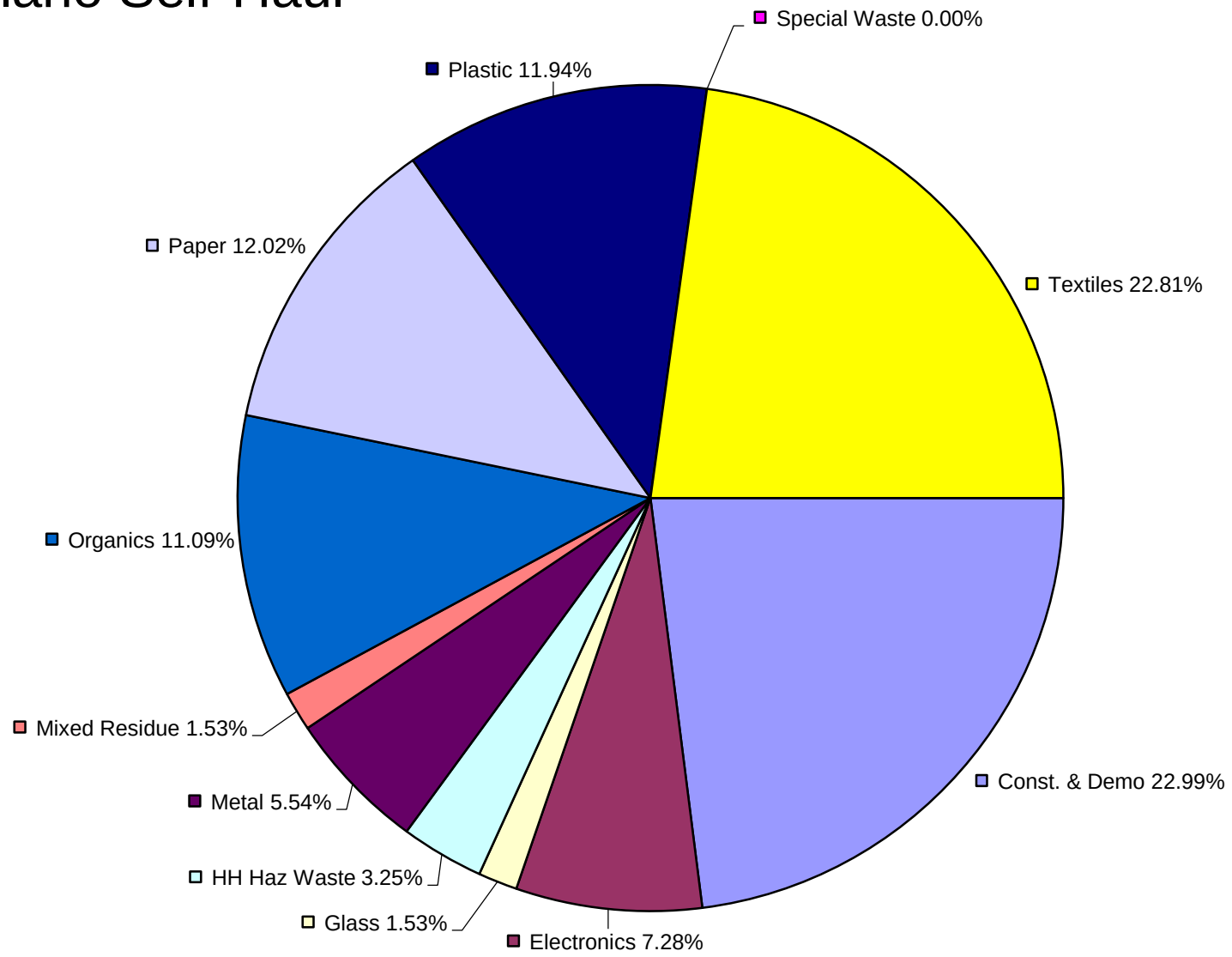
Delano Residential



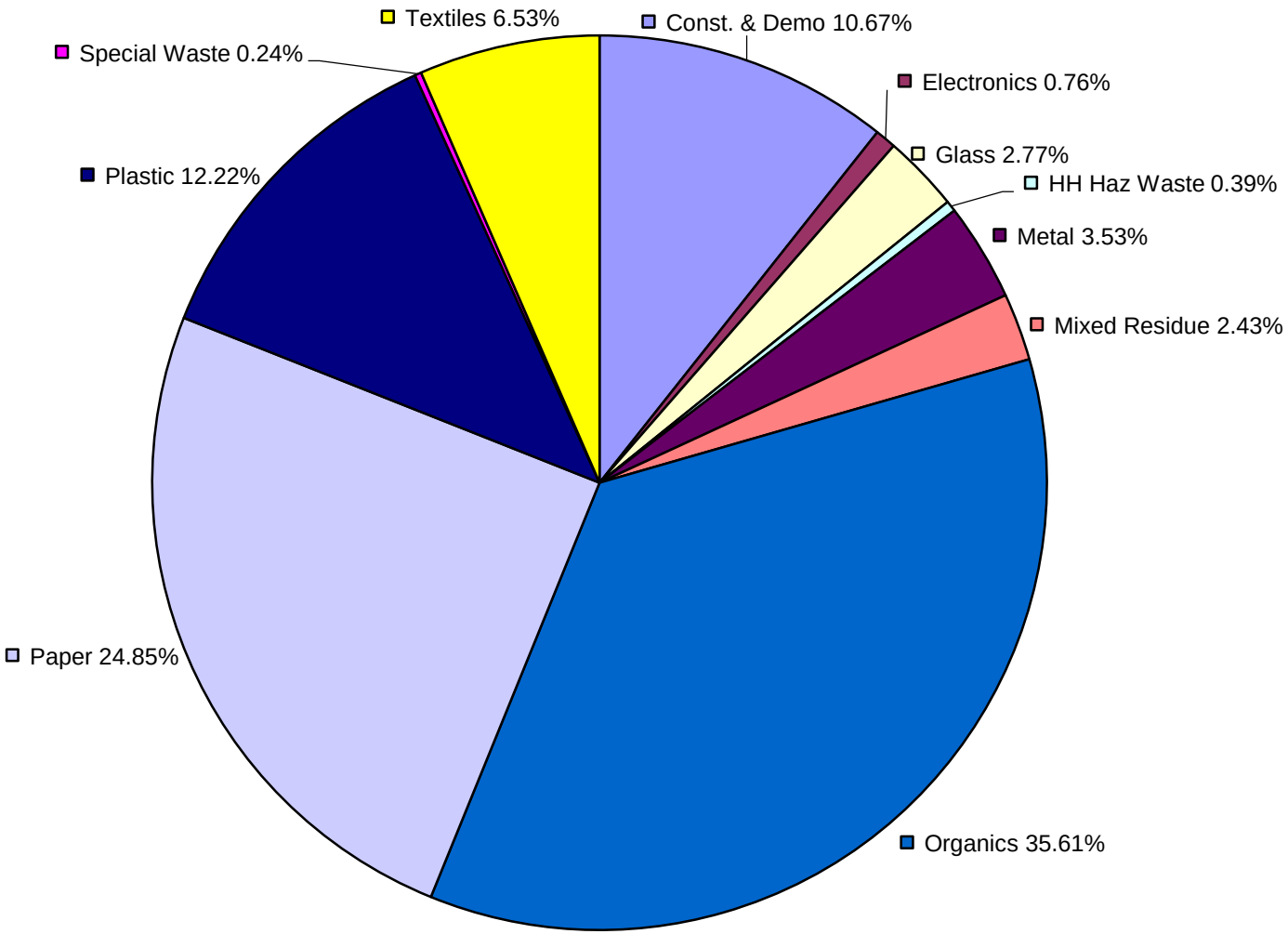
Delano Commercial



Delano Self-Haul



Tehachapi Overall



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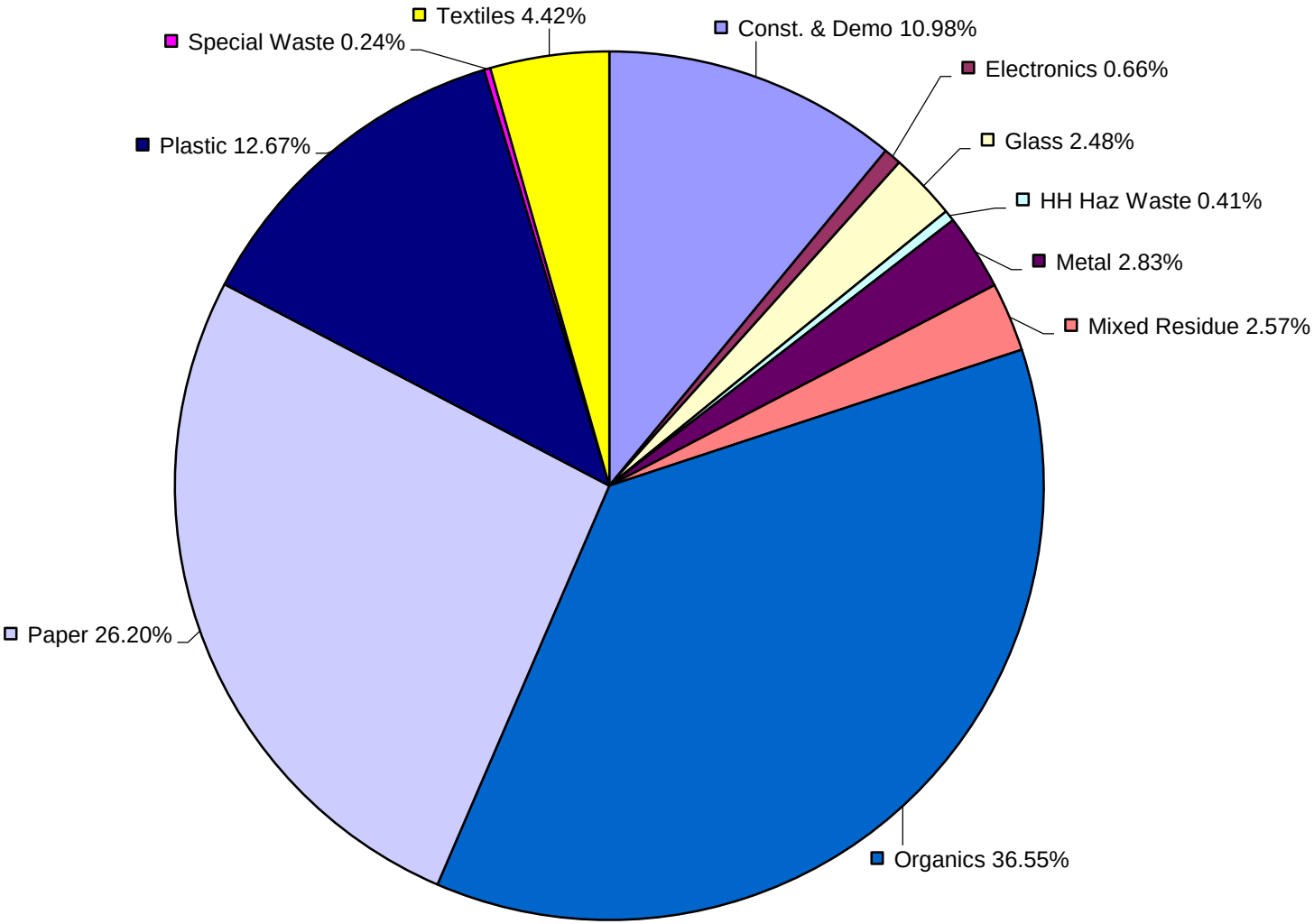

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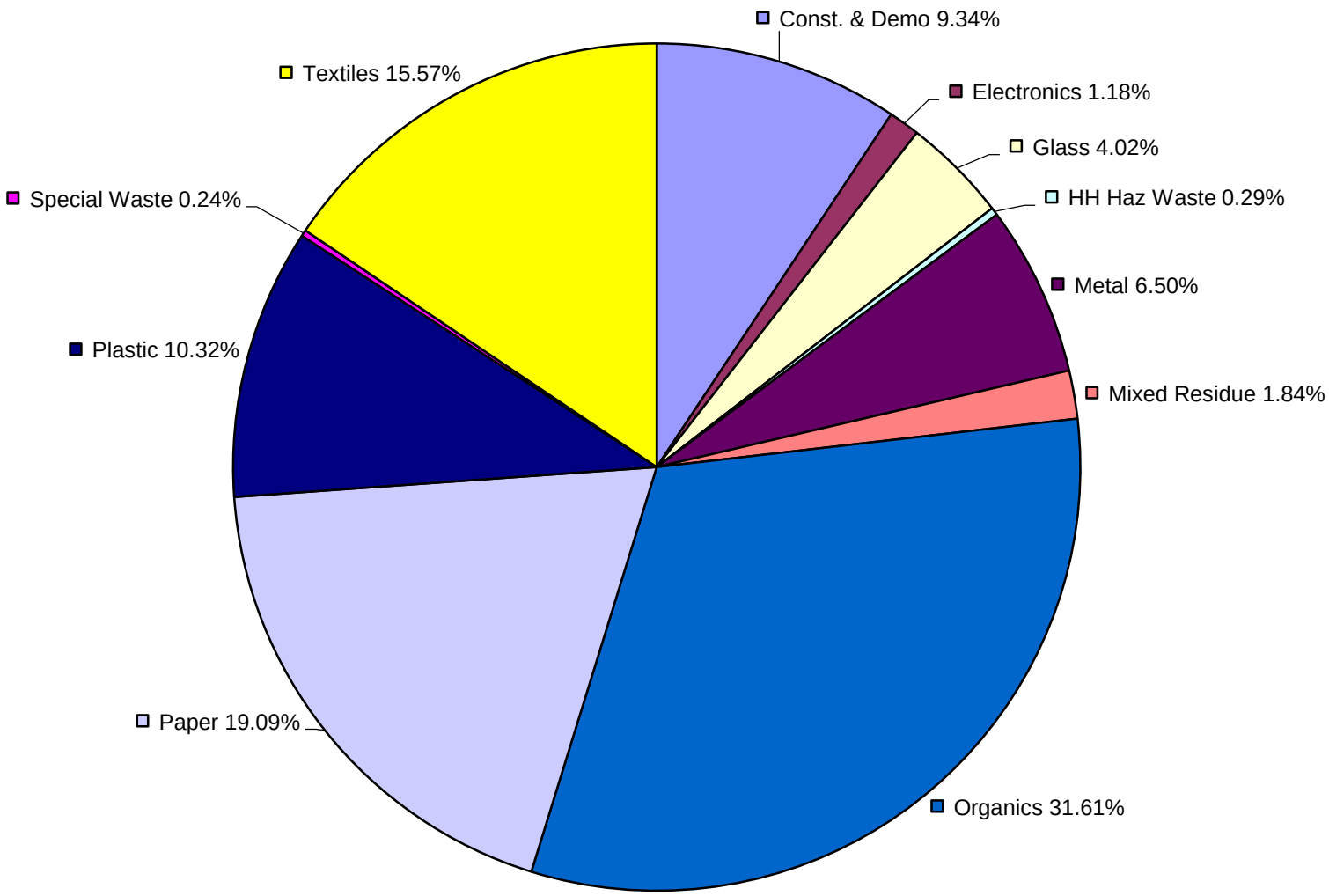
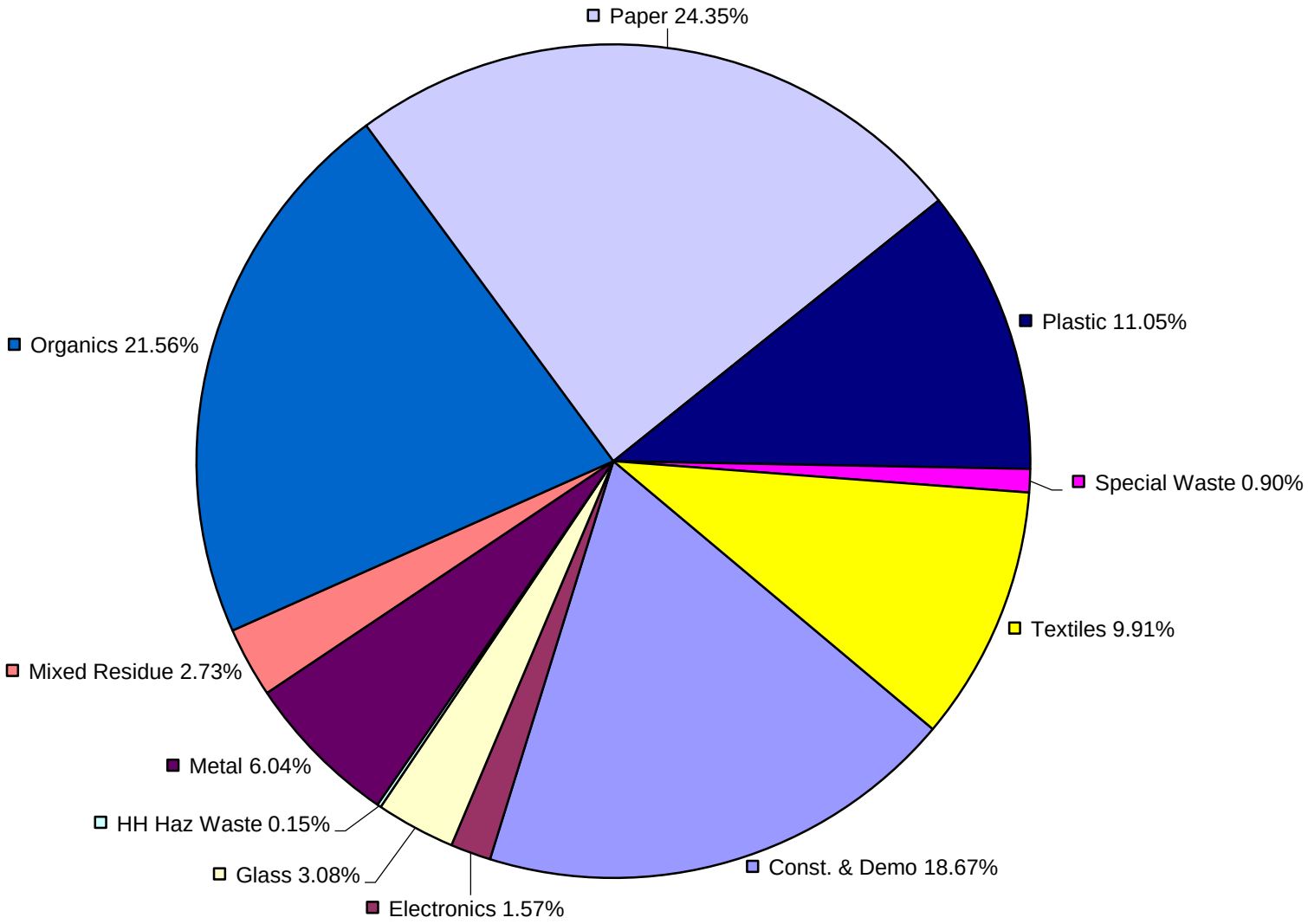
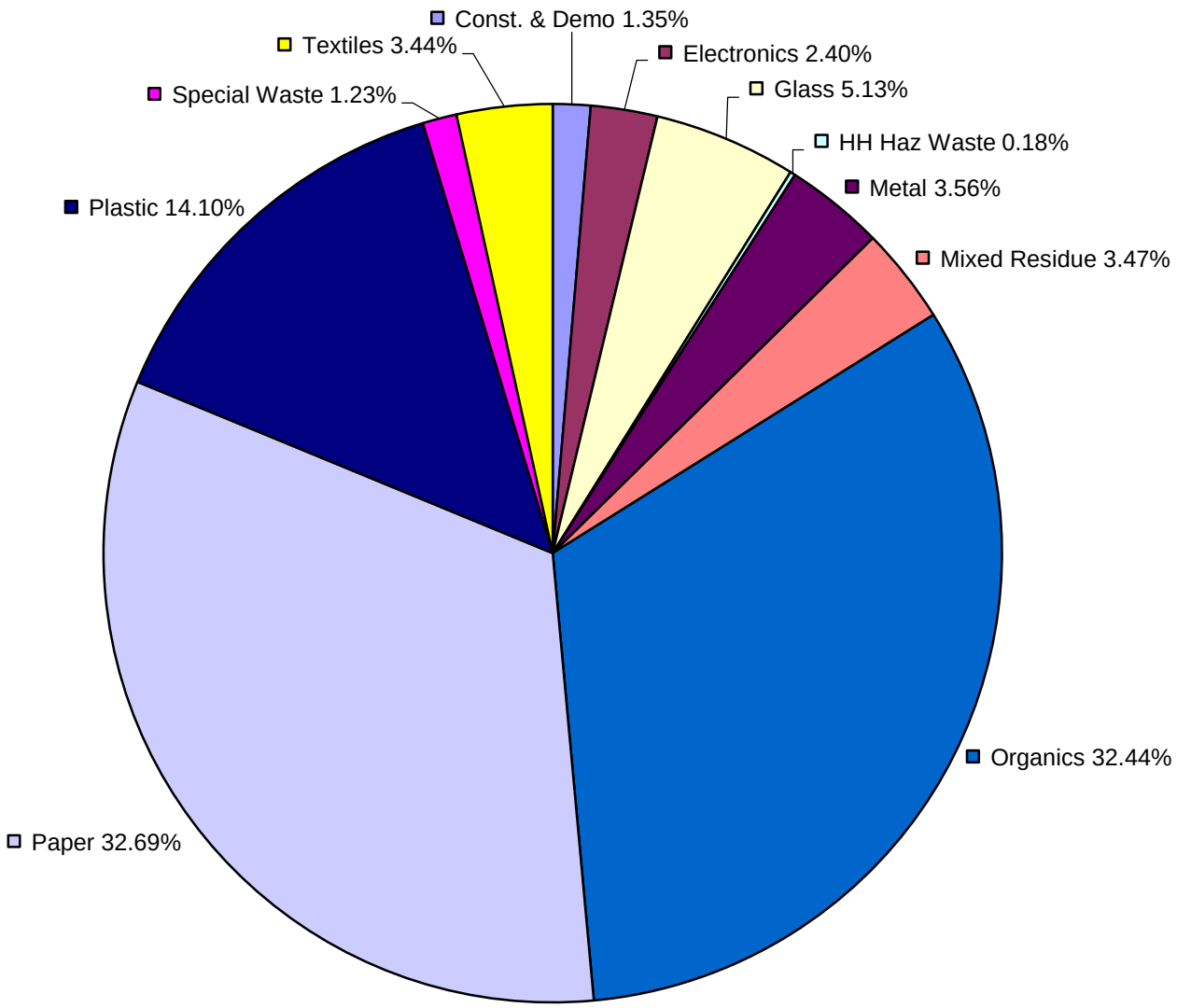


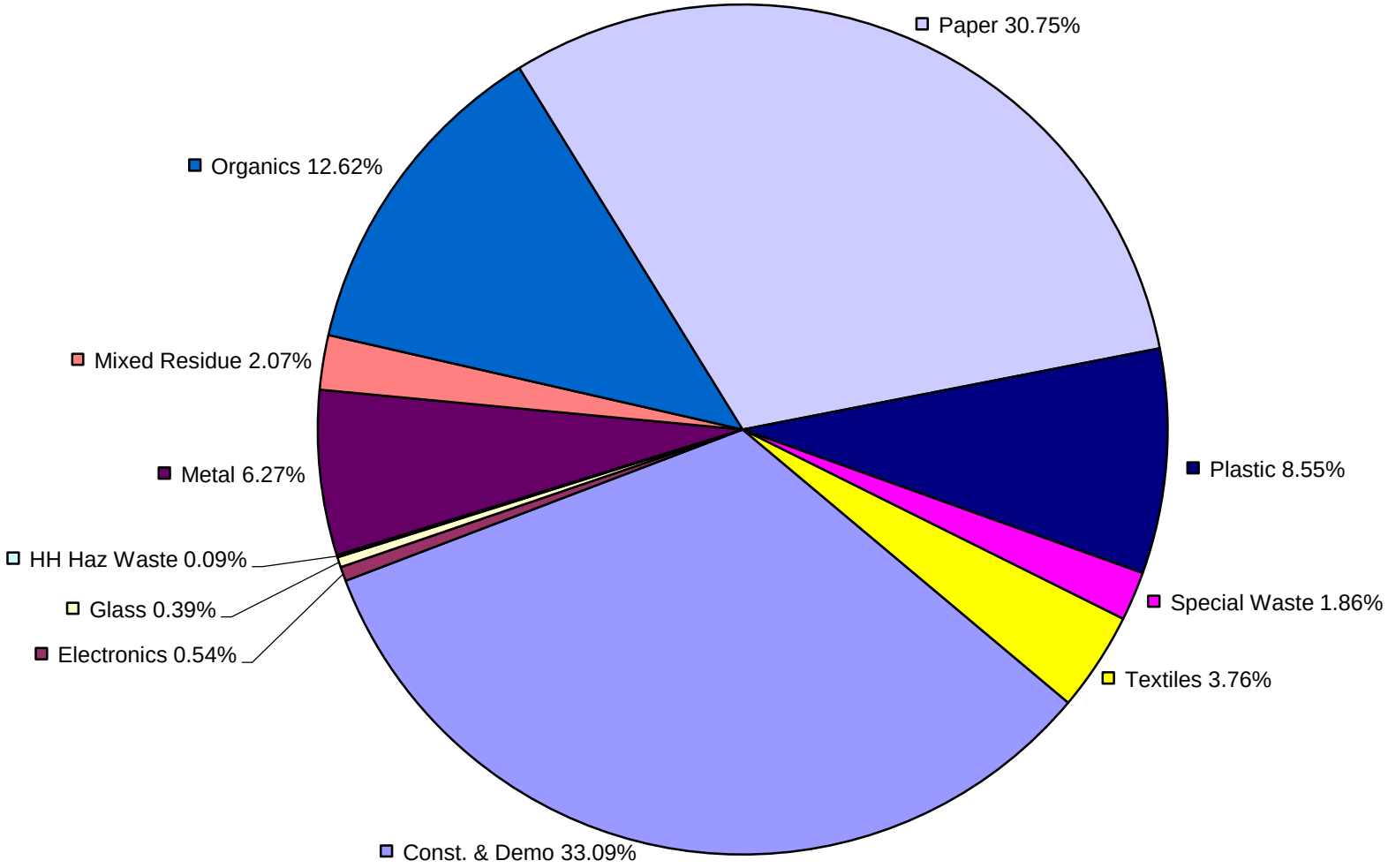
Ridgecrest Overall



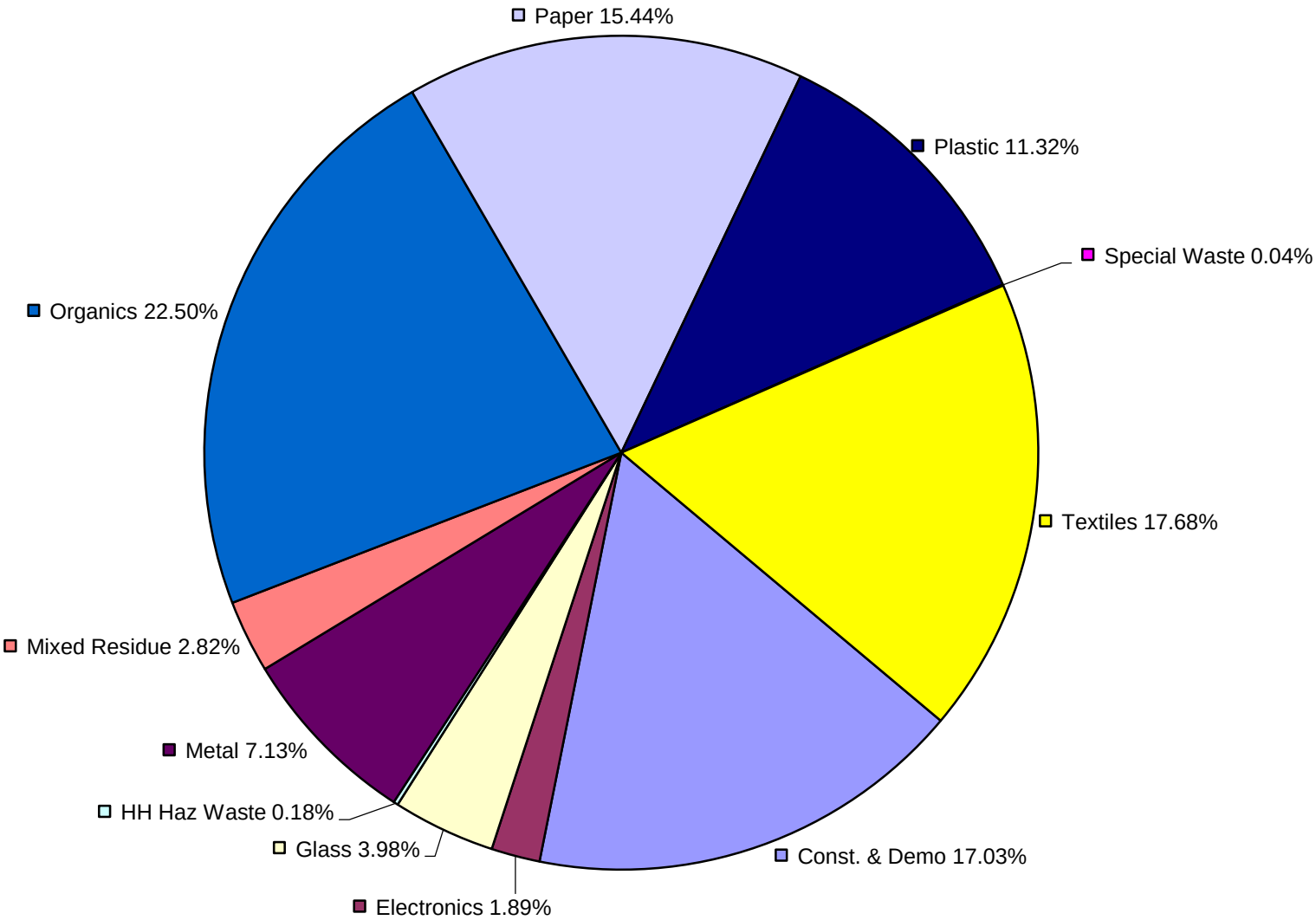
Ridgecrest Residential



Ridgecrest Commercial



Ridgecrest Self-Haul



Appendix I

Mandatory Commercial Recycling Program Summary

Summary of Kern County Unincorporated Area AB 341/Commercial Recycling Implementation Plan September 2015

Education/Outreach

The following activities will be completed in 2012 and will occur on an annual basis thereafter, unless otherwise noted or changed.

a) Electronic:

i. Kern County website related to Waste Management Programs will be updated with information on the new law and how to comply locally. http://www.kerncountywaste.com

ii. Kern County Public Works Department (KCPWD) will provide sample text describing AB 341 and how to comply locally.

b) Print:

i. The Waste Management Program newsletter (beginning Fall 2012) will continue to include info about new law and how to comply locally.

ii. The KCPWD will send a letter about the new law to all entities that potentially must comply with AB 341 thresholds that do not have recycling service and have not certified self-recycling. This letter will be sent annually beginning in 2013.

iii. Information describing AB341 and how to comply will be included in the Kern County Recycling Guide.

iv. Franchise Haulers will provide information to their respective customers about the new law and the recycling services offered by their company to comply locally.

c) Direct Contact:

i. KCPWD will provide information on the new law and how to comply locally during calls from businesses that have received letters per b(ii), or during general inquiries about service.

ii. KCPWD staff will respond to questions or inquiries from multi-family customers regarding the new law and will refer to appropriate franchise hauler for service adjustments or additional property specific information.

iii. The KCPWD will have the opportunity to provide outreach to civic associations and groups with info about the new law. Examples of organizations that may be contacted include:

- Greater Bakersfield Chamber of Commerce and Chambers of Commerce in other communities
- Air and Waste Management Association
- Civic Organization (Rotary, Lions, Kiwanis)
- Realtor Associations

a) The KCPWD has identified commercial entities and multifamily complexes that potentially fall under AB 341.

b) Franchise Haulers will provide a list and summary data to KCPWD staff on a semi-annual basis.

c) On an bi-annual basis, the commercial and multifamily entities that potentially fall under the AB 341 thresholds that currently do not have recycling service will be notified by letter of the requirement to recycle or certify self-recycling.

Reporting in Electronic Annual Report beginning with 2012 Annual Report

a) The KCPWD will report the total number of commercial entities and the total number of multifamily complexes that fall within the AB 341 thresholds that are not recycling to CalRecycle.

b) The KCPWD will report on education and outreach efforts, e.g., newsletters, public presentation, newspaper articles and monitoring efforts conducted during the year to Cal Recycle.

Exemptions

The County exempts businesses and multi-family dwellings located in County Permit Areas (more recently categorized as Rural Franchise Areas) from the requirements to comply with AB 341. The KCPWD Director may exempt other remote areas located within Franchise Area upon request and justification by the Franchise Hauler.

Appendix J

Mandatory Commercial Organics Recycling Program Summary

2015 Compostable Organic Program

Summary of Kern County Unincorporated Area
AB 1826/Commercial Organic Recycling Implementation Plan

Education/Outreach

The following activities will be completed in FY 2016/2017 and will occur on an annual basis thereafter, unless otherwise noted or changed.

a) Electronic:
   i. Kern County website related to Waste Management Programs will be updated with information on the new law and how to comply locally. http://www.kerncountywaste.com
   ii. Kern County Public Works Department (KCPWD) will provide sample text describing AB 341 and how to comply locally.

b) Print:
   i. The Waste Management Program newsletter (beginning Summer 2016) will include info about new law and how to comply locally.
   ii. The KCPWD will send a letter about the new law to all entities that potentially must comply with AB 1826 thresholds that do not have compostable organic recycling service and have not certified self-recycling of compostable organics. This letter will be sent beginning in 2016, with distribution expanded to reflect increasing regulatory thresholds.
   iii. The KCPWD will combine AB 341 notification and AB 1826 notification whenever possible to reduce public confusion, waste and program cost.
   iv. Information describing AB 1826 and how to comply will be included in the Kern County Recycling Guide.
   v. Franchise Haulers will provide information to their respective customers about the new law and the compostable organic collection services offered by their company to comply locally.

c) Direct Contact:
   i. KCPWD will provide information on the new law and how to comply locally during calls from businesses that have received letters per b(ii), or during general inquiries about service.
   ii. The KCPWD will have the opportunity to provide outreach to civic associations and groups with info about the new law. Examples of organizations that may be contacted include:
      - Greater Bakersfield Chamber of Commerce and Chambers of Commerce in other communities
      - Air and Waste Management Association
      - Civic Organization (Rotary, Lions, Kiwanis)
      - Hotel/Restaurant and Landscape Associations

a) The KCPWD has identified commercial entities that potentially fall under AB 1826.

b) Franchise Haulers will provide a list and summary data to KCPWD staff on a semi-annual basis.

c) On a bi-annual basis, the commercial entities that potentially fall under the AB 1826 thresholds that currently do not have compostable organic collection services will be notified by letter of the requirement to recycle or certify self-recycling.

Reporting in Electronic Annual Report beginning with 2016 Annual Report (submitted in 2017)

a) The KCPWD will report the total number of commercial entities that fall within the AB 341 thresholds that have no confirmed compliance to CalRecycle.

b) The KCPWD will report on education and outreach efforts, e.g., newsletters, public presentation, newspaper articles and monitoring efforts conducted during the year to Cal Recycle.

Exemptions

The County exempts businesses located in County Permit Areas (more recently categorized as Rural/Remote Franchise Areas) from the requirements to comply with AB 1826. The KCPWD Director may exempt other remote areas located within Franchise Area upon request and justification by the Franchise Hauler.

2015
COMPOSTABLE
ORGANIC PROGRAM

CRAIG M. POPE, DIRECTOR
Kern County Public Works Department
2700 M Street, Suite 450
Bakersfield, CA 93301

September 2015

Printed on Recycled Paper

Overview

The Department has developed a strategy for handling compostable organic material for Kern County. Pending regulations will require some or all of that waste stream be recycled. The proposed strategy will affect many facility operated by the Department and will require an investment in both staff and equipment in order to allow the Department to provide acceptable end uses for the material.

The following is a site by site analysis of what has been done and what additional resources would be needed at each site to allow the Department to remain in compliance with the proposed regulations. The implementation is staged over a number of years with the program being implemented by area. Costs associated with the expansions are included in the analysis with a summary of those costs included following the last facility evaluated.*

Next a summary of the cost per ton of the program, by fiscal year, is included to assist in the overall analysis of the programs cost effectiveness.

Finally, a query was run to determine an estimated amount of material which may be charged if there is a modification of the current policies. The material listed in the tables is what is currently believed to be material which would fall into the commercial classification if regulatory changes are indeed enacted.

*** A portion of this plan has been approved by the Board of Supervisors for implementation. Those items already approved and/or implemented are highlighted in a light gray. Additional proposed actions or plans are in plain text.**

SHAFTER FACILITY

The Department has committed to improving the capabilities of the compostable organics diversion program to allow staff to more effectively remove the contamination from the grass and other compostable material currently being accepted. This was determined to be necessary in order to allow continued use of the Synagro option which accepts the material at no cost. The plan for this improvement includes purchasing the following:

1. Star Screen (Determined to be the Komptech L3) Approximate cost $750,000
2. Dedicated loader for Start Screen Approximate cost $200,000
3. 20,000ft^2 of concrete for material processing area. Approximate cost $300,000

While implementing the above improvements, legislative changes were being implemented that would drastically change the program and cause a large increase in throughput. In order to handle that increase the following acquisitions provided the Department with an acceptable processing capability to handle the organics:

4. Sorting station to process overs from Start Screen Approximate cost $150,000
5. Slow Speed Shredder to size reduce overs. Approximate cost $700,000

The sorting station required the installation of a concrete pad to allow the equipment to be correctly installed. Once that final piece of equipment is obtained the program would effectively have a system that could remove contaminates and size the material for use in any compost system. This system would also process out grass that appears to be very marketable at this time as cattle feed. The mechanization as outlined would allow the system to process and make ready for use as much as 100 tons per day.

At this point we needed to evaluate continuing to ship the material to Synagro or constructing and operating a compost facility on site. Shipping that quantity of material to Synagro cost the Department, (at today's prices) approximately $77,200 per year.

A compost facility capable of handling the material could be added to the diversion area by utilizing a portion of the 20 acres being held unused and adjacent to the current diversion area. The system currently being considered the best for this purpose is a Gore Compost system which is an aerated static pile system utilizing Gore-Tex covers to control moisture and VOC emissions. Building a facility such as this would provide a turnkey operation at this facility that could take in the compostable organic material, clean and process that material, compost it on site, and produce a finish product suitable for sale. Resources needed for that expansion would be as listed below:

6. Gore Compost Facility Approximate cost $6,000,000
7. Additional loader for compost operation Approximate cost $ 250,000
8. Skid steer loader Approximate cost $ 30,000

The acceptance of food waste in the program is something that the Department knows will be needed and operational plans to handle that material have been reviewed. At first, that portion of the program would be handled by creating a bunker collection point for food waste and co-mingling that material with sufficient grass clippings to control the moisture. Once mixed that material would be shipped to the Mount Vernon Compost Facility until such time as the Department completed the construction of the Shafter Compost Facility. (Currently slated for 2017).

Current Operations

Current operation is using line items 1-3 and 5. It is being staffed with existing employees hired to operate the program. A breakdown of costs at this point is as follows.

Capital cost $2,100,000 Annualized over a ten year period for an annual cost of	$210,000
Current annual labor costs to handle this tonnage level	$270,000
Additional maintenance cost	$ 21,000
Total Annual Cost	$501,000

Total tonnage processed 30,000
Cost per ton process $501,000/30,000tons = $16.70/ton

Cost to ship 21,600 tons to Synagro (Current end market) $8/ton
Cost for shipping 21,600 tons x $8.00/ton = $172,800
Total Annual cost for current tonnage (Including freight) $673,800
Current Annual cost per ton $22.46

**These numbers include the sorting station even though it will not be acquired and installed until 2016*

Proposed Expansion #1 Fiscal Year 2017/18
Construct & Operate Compost Facility

This expansion begins a process of increasing both the green waste other feed stocks necessary to the creation of the compost. Specifically, the Department would start to work with local dairies and feed lots to accept their manure into the program. (This material generally is being spread on land owned by those entities. However, they are beginning to look for additional options to reduce the amount of manure currently being land applied). The estimate to operate is that the Department will attract 20,000 tons of this new material and will charge the ½ price rate for recycling. That will produce a revenue offset of $450,000 and will be backed out of the cost as shown below.

This expansion level would require the Department to acquire 6 – 8 as listed above. The cost factors at this level would be as follows:

Capital cost $ 6,280,000 Annualized over a 20 year period for an annual cost of	$314,000
Additional labor costs to handle this tonnage level	$ 90,300
Additional maintenance/Ops cost	$ 75,000
Total Additional Annual Cost	$479,300
Total tonnage processed 50,000	

New Total Annual Cost $501,000 + $479,300 = $980,300

Expected revenue offsets

New waste stream accepted due to compost program	$450,000
Sale of finished compost to various markets. (25,000 tons x $10 ton)	$250,000
Total annual revenue offsets	$700,000

Net program cost: $980,300 - $700,000 = $280,300
Net cost per ton: $280,300/50,000tons = $5.61/ton

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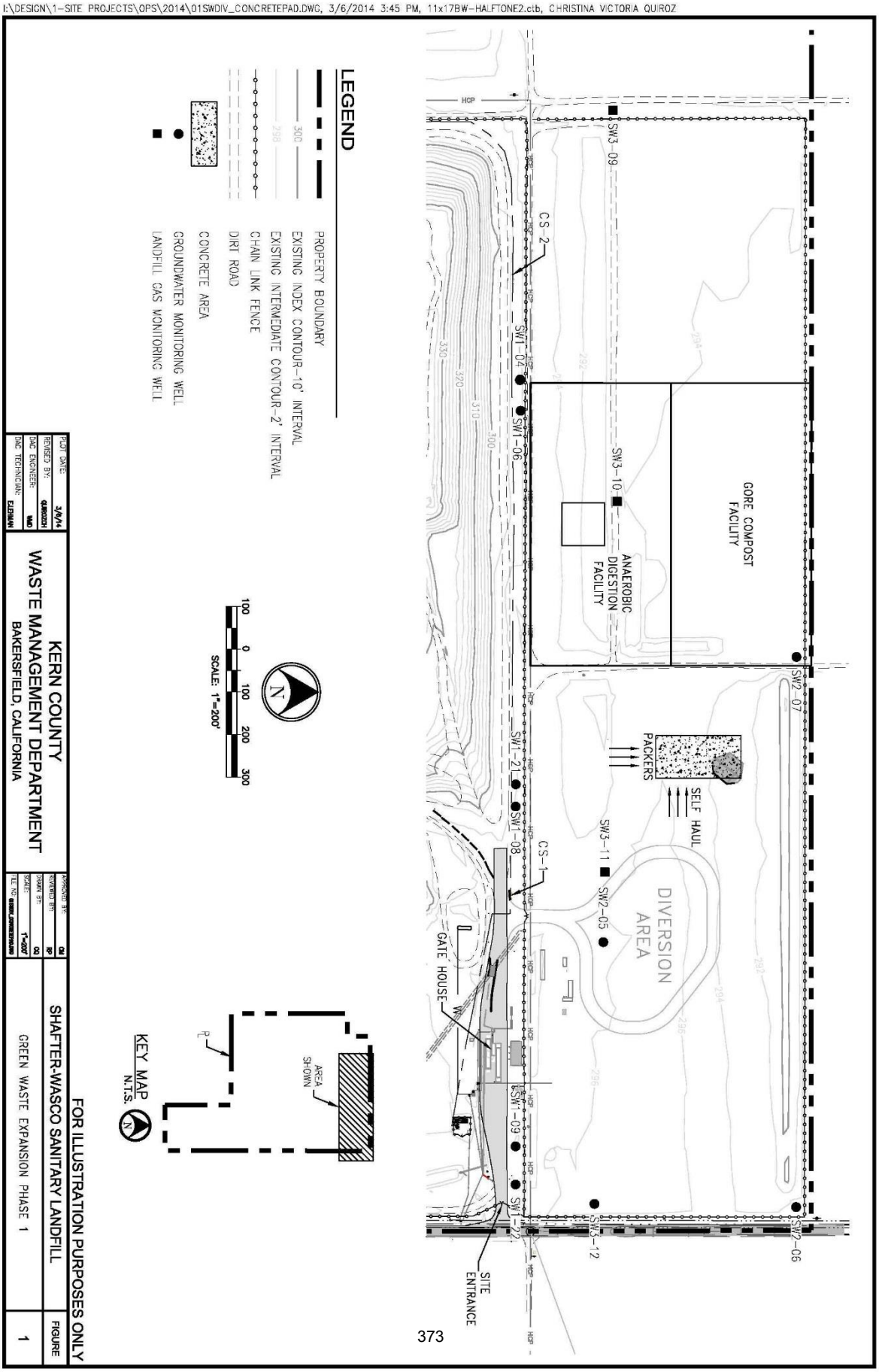

BENA FACILITY

Current Operations

Currently it is required that the L3 Star Screen be transported to the facility weekly and all compostable organic material brought to the facility be sorted and cleaned. The clean organic material is then used as Alternative Daily Cover (ADC). The Department recognized the inefficiency of transporting the equipment weekly from the Shafter facility as well as the problem caused by not being able to process at both sites simultaneously. In order to correct the problem a second L3 Star Screen was approved for purchase as well as an additional staff member to operate the program. Cost to achieve the current operations are as shown below.

Capital Cost:

9.	Dedicated loader for Star Screen	Approximate cost $ 250,000
10.	Skid steer loader	Approximate cost $ 30,000
11.	Star Screen (Determined to be the Komptech L3)	Approximate cost $ 750,000
	Total Capital Expense	$1,030,000

Performing this sort on the grass would increase the labor cost for the program significantly. It is anticipated that it would take 3 staff member 2 days per week to operate the equipment and produce the cleaned material. It is estimated that the green waste material would break down as follows: 72% usable grass, 18% overs being sent to the active face, 10% residual being taken to the face for disposal. Given these assumption the annual cost breakdown would be as follows:

Additional Capital cost $1,030,000 annualized for ten years	$103,000
Additional labor cost for program	$ 90,300
Additional maintenance/Ops cost	$ 5,000
Additional Annual Cost	$198,300

New total annual tonnage processed 20,000

Current cost per ton of program: $198,300/20,000 tons = $9.92/ton

It is anticipated that the Department will discontinue the ADC program in the near future and begin shipping the cleaned material to either the Mount Vernon facility or the Synagro facility. Shipping the material will add additional cost to the program. Those costs are estimated to be the following:

Shipping cost for new tonnage 14,400 tons x $8.00/ton = $115,200

Total Annual cost $198,300 + $115,200 = $313,500

Cost per ton of program: $15.68/ton

Approximately 14,400 tons of material will be sent to either Synagro, or to the Mt Vernon facility. This split will have to be determined in the operations phase but $50,000 per year has been added to the expected cost of the Mt Vernon Facility contract as a worst case scenario. In order to not double count that expense it is not being included here.

TAFT FACILITY

The Compostable Organics program requires that we implement an organics program at most sites. At the Taft SL the current waste stream of green waste is approximately 500 tons per year. This is a marginal volume and the material coming to the facility is clean enough to allow on site staff to separate the material for shipment to Synagro.

The cost to handle this waste stream is as follows:

Loading Cost: $3. 00 X 500 tons = $1,500
Shipping Cost: $8.00 x 500 tons = $4,000
Total cost to divert green waste at Taft = $5,500
Cost per ton = $5,500/500 tons = $11.00/ton

KERN VALLEY FACILITY

The Kern Valley site is located in a rural area which allows for the exemption of the requirements for commercial entities to participate. Due to the low volume of material in this area, combined with the remoteness of processing facilities, this area is being exempted from the program.

The program can be re-evaluated for possible inclusion at a later date if the situation warrants.

RIDGECREST FACILITY

The Compostable Organics program, as previously stated, will require that we implement an organics program at sites currently not participating in the program. However, the Ridgecrest SL waste stream of green waste is approximately 3,100 tons per year. This tonnage is significant and large enough that a method to handle it would need to be implemented.

Current Operations

Current operation is material is comingled with waste and disposed.

The cost to handle this waste stream is therefore as follows:

Per ton operations charge: $12.20 X 3,100 tons = $37,820
Per ton BOE payment: $1.40 x 3100 tons = $4,340
Total cost to dispose green waste at Ridgecrest = $42,160

Proposed Expansion #1 Fiscal Year 2016/17
Ship Green Waste to Bena from Ridgecrest

This expansion level will require that the grass be kept separate from the waste and shipped separately to the Bena SL for diversion. This requires that some mechanism be put in place to load the material into transport vehicles and that the material be transported to Bena or Mojave for processing.

The Department has been anticipating taking on the diversion work at this facility and this would facilitate that implementation. To create this area and start the diversion activities the following would be needed.

12. Dedicated loader for operation	Approximate cost $ 200,000
13. Skid steer loader	Approximate cost $ 30,000
14. Fuel tanks, Office trailer other improvements	Approximate cost $ 250,000
Total capital cost to create diversion area	$ 480,000

The newly created diversion area would require four staff members to operate.

Additional labor costs (four positions)	$ 361,200
Annual Maintenance costs	$ 9,600
Capital cost $480,000 annualized over a ten-year period	$ 48,000
Labor costs	$ 361,200
Maintenance cost	$ 9,600
Total	$ 418,800

Cost per ton for green waste portion = 20% of cost of diversion area	$ 83,760
Cost per ton for shipping to Mojave $12/ton x 3,100 tons	$ 37,200
Total cost for green waste portion	$ 120,960

Cost per ton: $120,960/3,100 tons = $39.02/ton

BORON FACILITY

The Boron site is located in a rural area which allows for the exemption of the requirements for commercial entities to participate. Due to the low volume of material in this area, combined with the remoteness of processing facilities, this area is being exempted from the program.

The program can be re-evaluated for possible inclusion at a later date if the situation warrants.

MOJAVE FACILITY

At the Mojave SL the current waste stream of organics is approximately 600 tons per year with 150 tons of wood. This is a marginal volume to support a separate program and that material would have to be transferred to a larger facility with an existing program. However, as the program in eastern Kern County grows and expands this site would be a prime location to handle the material generated in the eastern area.

Current Operations

Current operation is material is comingled with waste and disposed.

The cost to handle this waste stream is therefore as follows:

Per ton operations charge: $12.20 X 750 tons = $9,150
Per ton BOE payment: $1.40 x 750 tons = $1,050
Total cost to dispose organics at Mojave = $10,200

Proposed Expansion #1 Fiscal Year 2016/17
Ship Green Waste to Bena or Mount Vernon from Mojave

This expansion level will require that the grass be kept separate and shipped to the Bena SL for diversion. This would require that some mechanism be put in place to load the material into transport vehicles and the material be transported to Bena or Mount Vernon for processing.

The acceptance of food waste in the program is something that the Department knows will be needed and operational plans to handle that material have been reviewed. At first, that portion of the program would be handled by creating a bunker collection point for food waste and co-mingling that material with sufficient grass clippings to control the moisture. Once mixed that material would be shipped to the Mount Vernon Compost Facility until such time as the Department completed the construction of the Mojave Compost Facility. (Currently slated for 2019)

The Department has been anticipating taking on the diversion work at this facility and this would facilitate that implementation. Opening this diversion area is expected to increase the tonnage diverted by the facility significantly. It is also anticipated that the compostable organic material diverted would increase to approximately 3,100 tons. To create this area and start the diversion activities the following would be needed:

15. Dedicated loader for operation	Approximate cost $	200,000
16. Skid steer loader	Approximate cost $	30,000
17. Fuel tanks, Office trailer other improvements	Approximate cost $	250,000
Total capital cost to create diversion area	$	480,000

The newly created diversion area would require four staff members to operate.

Additional labor costs (four positions)	$ 361,200
Annual Maintenance costs	$ 9,600

Capital cost $480,000 annualized over a ten-year period	$ 48,000
Labor costs	$ 361,200
Maintenance cost	$ 9,600
Total	$ 418,800

Cost per ton for green waste portion = 20% of cost of diversion area	$ 83,760
Cost per ton for shipping to Bena $12/ton x 3,100 tons	$ 37,200
Total cost for green waste portion	$ 120,960

Cost per ton: $120,960/3,100 tons = $39.02/ton

Proposed Expansion #2 Fiscal Year 2017/18
Sort and Clean Green Waste at Mojave
Accept Curbside Green Waste/Purchase L3 Star Screen

In order to handle the eastern region of Kern County a new diversion operation which includes compostable organics diversion would have to be constructed, staffed and operated. In order to begin this operation the following would be needed:

18. Star Screen (Determined to be the Komptech L3)	Approximate cost $ 750,000
19. Dedicated loader for Start Screen	Approximate cost $ 200,000
20. Brush Grapple Bucket	Approximate cost $ 20,000
21. 20,000ft^2 of concrete for material processing area.	Approximate cost $ 300,000
22. Sorting station to process overs from Start Screen	Approximate cost $ 50,000
23. Slow Speed Shredder to size reduce overs.	Approximate cost $ 700,000
Total Capital Costs	$2,020,000

Capital cost $ 2,020,000 Annualized over a 10-year period for an annual cost of	$ 202,000
Additional labor costs to handle this tonnage level (four positions)	$ 361,200
Additional maintenance/Ops cost	$ 120,000
Total Additional Annual Cost	$ 683,200

Total tonnage processed 50,000

Cost per ton for shipping to Bena $12/ton x 35,000 tons = $420,000

New Total Annual Cost = $120,960 + $683,200 + $420,000 = $1,224,160
Cost Per ton $1,224,160/50,000 =$24.48/ton

Proposed Expansion #3 Fiscal Year 2019/20
Construct & Operate Compost Facility

24. Gore Compost Facility	Approximate cost $6,000,000
25. Additional loader for this operation	Approximate cost $ 200,000
26. Skid steer loader	Approximate cost $ 30,000
27. Fuel tanks, Office trailer other improvements	Approximate cost $ 250,000
Total Capital Improvements for Compost Facility	$6,480,000

Capital cost $ 6,480,000 Annualized over a 10-year period	$ 648,000
Additional labor costs to handle this facility (four positions)	$ 361,200
Additional maintenance/Ops cost	$ 20,000
Total Additional Annual Cost for Compost facility	$1,029,200

Expected revenue offsets	
New waste stream accepted due to compost program	$450,000
Sale of finished compost to various markets. (25,000 tons x $10 ton)	$250,000
Total annual revenue offsets	$800,000

Net program cost: $120,960 + $683,200 + $1,029,200 - $800,000 = $1,033,360
Net cost per ton: $1,013,360 /50,000 tons = $20.27/ton

TEHACHAPI FACILITY

The Tehachapi SL waste stream of green waste is approximately 600 tons per year. This is a marginal volume to support a separate program and that material would have to be transferred to a larger facility with an existing program.

Current Operations

Current operation is material is comingled with waste and disposed.

The cost to handle this waste stream is therefore as follows:

Per ton operations charge: $3.70 X 600 tons = $2,220
Per ton BOE payment: $1.40 x 600 tons = $840
Total cost to dispose green waste at Tehachapi = $3,060

Proposed Expansion #1 Fiscal Year 2016/17
Ship Green Waste to Bena from Tehachapi

This expansion level will require that the grass be kept separate from the waste and shipped separately to the Bena SL for diversion. This would require that some mechanism be put in place to load the material into transport vehicles and the material be transported to Bena for processing.

Loading cost $10 ton x 600 tons = $6,000
Shipping cost 600tons x $9.25/ton = $5,550
Total Annual cost at expansion level 1 $6,000 + $5,500 = $11,500
Cost per ton for program: $11,500/600 tons = $19.17/ton

Capital Expense Line Item By Fiscal Year

Line Item	Cost	Year
Shafter		
1. Star Screen (Determined to be the Komptech L3)	Approximate cost $ 750,000	14/15
2. Dedicated loader for Start Screen	Approximate cost $ 200,000	14/15
3. 20,000 ft^2 of concrete for material processing area	Approximate cost $ 300,000	15/16
4. Sorting station to process overs from Start Screen	Approximate cost $ 150,000	16/17
5. Slow Speed Shredder to size reduce overs	Approximate cost $ 700,000	15/16
6. Gore Compost Facility	Approximate cost $ 6,000,000	17/18
7. Additional loader for compost operation	Approximate cost $ 250,000	17/18
8. Skid steer loader	Approximate cost $ 30,000	17/18
Bena		
9. Dedicated loader for Star Screen	Approximate cost $ 250,000	14/15
10. Skid steer loader	Approximate cost $ 30,000	14/15
11. Star Screen (Determined to be the Komptech L3)	Approximate cost $ 750,000	15/16
Ridgecrest		
12. Dedicated loader for operation	Approximate cost $ 200,000	16/17
13. Skid steer loader	Approximate cost $ 30,000	16/17
14. Fuel tanks, Office trailer other improvements	Approximate cost $ 250,000	16/17
Mojave		
15. Dedicated loader for operation	Approximate cost $ 200,000	16/17
16. Skid steer loader	Approximate cost $ 30,000	16/17
17. Fuel tanks, Office trailer other improvements	Approximate cost $ 250,000	16/17
18. Star Screen (Determined to be the Komptech L3)	Approximate cost $ 750,000	17/18
19. Dedicated loader for Start Screen	Approximate cost $ 200,000	17/18
20. Brush Grapple Bucket	Approximate cost $ 20,000	17/18
21. 20,000 ft^2 of concrete for material processing area	Approximate cost $ 300,000	17/18
22. Sorting station to process overs from Start Screen	Approximate cost $ 50,000	17/18
23. Slow Speed Shredder to size reduce overs	Approximate cost $ 700,000	17/18
24. Gore Compost Facility	Approximate cost $ 6,000,000	19/20
25. Additional loader for this operation	Approximate cost $ 200,000	19/20
26. Skid steer loader	Approximate cost $ 30,000	19/20
27. Fuel tanks, Office trailer other improvements	Approximate cost $ 250,000	19/20

Implementation Schedule & Annual Cost

	14/15	15/16	16/17	17/18	18/19
Shafter					
Capital Cost	$ 950,000	$1,000,000	$ 150,000	$ 6,280,000	$ 0
Additional Labor Cost	$ 180,600	$ 90,300	$	$ 90,300	$ 0
Maintenance/Ops Cost	$ 21,000	$ 0	$	$ 75,000	$ 0
Possible Revenue	$ 0	$ 0	$	$ 700,000	$ 0
Bena					
Capital Cost	$ 280,000	$ 750,000	$ 0	$ 0	$ 0
Additional Labor Cost	$ 0	$ 90,300	$ 0	$ 0	$ 0
Maintenance/OPS Cost	$ 5,000	$ 15,000	$ 0	$ 0	$ 0
Possible Revenue	$ 0	$ 0	$ 0	$ 0	$ 0
Taft					
Capital Costs	$ 0	$ 0	$ 0	$ 0	$ 0
Kern Valley					
Capital Costs	$ 0	$ 0	$ 0	$ 0	$ 0
Ridgecrest					
Capital Cost	$ 0	$ 0	$ 480,000	$ 0	$ 0
Additional Labor Cost	$ 0	$ 0	$ 361,200	$ 0	$ 0
Maintenance/Ops Cost	$ 0	$ 0	$ 9,600	$ 0	$ 0
Boron					
Capital Costs	$ 0	$ 0	$ 0	$ 0	$ 0
Mojave					
Capital Cost	$ 0	$ 0	$ 480,000	$ 2,020,000	$ 6,480,000
Additional Labor Cost	$ 0	$ 0	$ 361,200	$ 361,200	$ 361,200
Maintenance/OPS Cost	$ 0	$ 0	$ 9,600	$ 120,000	$ 20,000
Possible Revenue	$ 0	$ 0	$ 0	$ 0	$ 800,000
Tehachapi					
Capital Costs	$ 0	$ 0	$ 0	$ 0	$ 0
City of Bakersfield					
Annual Cost	$ 0	$1,050,000	$1,100,000	$1,150,000	$1,200,000

Annual Cost Summary

TOTALS	14/15	15/16	16/17	17/18	18/19
CAPITAL COST	$1,230,000	$1,750,000	$1,110,000	$ 8,300,000	$ 6,480,000
LABOR COST (Add) (# OF NEW POSITIONS)	$ 180,600 (2)	$ 180,600 (2)	$ 722,400 (8)	$ 451,500 (5)	$ 361,200 (4)
MAINTENANCE COSTS (Additional)	$ 26,000	$ 15,000	$ 19,200	$ 195,000	$ 20,000
CONTRACT COSTS (Additional)	$ 0	$1,050,000	$1,100,000	$ 1,150,000	$1,200,000
REVENUE (Additional)	$ 0	$ 0	$ 0	$ 700,000	$ 800,000

Cost Per Ton to Operate Green Waste Program

	Fiscal Year	14-15	15-16	16-17	17-18	18-19
Bena	Tons	20000	20000	20000	20000	20000
	Cost	$ 33,000	$ 198,300	$ 313,500	$ 313,500	$ 313,500
	Cost/Ton	$ 1.65	$ 9.92	$ 15.68	$ 15.68	$ 15.68
Boron	Tons					
	Cost					
	Cost/Ton					
Kern Valley	Tons					
	Cost					
	Cost/Ton					
Mojave	Tons			3100	50000	50000
	Cost			$ 120,960	$ 1,224,160	$ 1,013,360
	Cost/Ton			$ 39.02	$ 24.48	$ 20.27
Ridgecrest	Tons			3100	3100	3100
	Cost			$ 120,960	$ 120,960	$ 120,960
	Cost/Ton			$ 39.02	$ 39.02	$ 39.02
Shafter	Tons	5100	30000	30000	50000	50000
	Cost	$ 168,100	$ 673,800	$ 673,800	$ 280,300	$ 280,300
	Cost/Ton	$ 32.96	$ 22.46	$ 22.46	$ 5.61	$ 5.61
Taft	Tons	500	500	500	500	500
	Cost	$ 5,500	$ 5,500	$ 5,500	$ 5,500	$ 5,500
	Cost/Ton	$ 11.00	$ 11.00	$ 11.00	$ 11.00	$ 11.00
Tehachapi	Tons			600	600	600
	Cost			$ 11,500	$ 11,500	$ 11,500
	Cost/Ton			$ 19.17	$ 19.17	$ 19.17
Total Tons		25600	50500	57300	124200	124200
Total Cost		$ 206,600	$ 877,600	$ 1,246,220	$ 1,955,920	$ 1,745,120
Total Cost/Ton		$ 8.07	$ 17.38	$ 21.75	$ 15.75	$ 14.05

Commercial vs. Residential Tonnage

The Department currently receives significant amounts of green waste material from various sources. However, very little of the material is claimed as commercial. In order to try and estimate the amount that might be coded commercial a query was performed by vehicle type bringing the material to the facilities. All cars and pickup trucks were listed as residential while all other larger vehicle types were listed as commercial. The results of that query are as follows:

Customer type Residential

Sum of Net TN Row Labels	Bena	Boron	Kern Valley	Lebec	McFarland	Mojave	Ridgecrest	Shafter	Taft	Tehachapi	Grand Total
1130-SGRN - Src Sep	217.40			49.42	148.79			311.29	93.97		820.87
1140-SGRS - Src Sep	96.07			7.32	67.03			70.74	6.95		248.11
1180-SLVS - Src Sep	15.49			29.50	26.46			25.35	8.85		105.63
1195-SMNR - Src Sep	7.38			0.63				4.13	4.18		16.32
1230-SPRN - Src Sep	226.08		138.90	273.52	376.77		84.32	215.18	87.34	149.73	1,551.82
240-GD - Garden Debri	11.02		42.92	0.63	0.45	3.82	35.88	0.87		75.16	170.75
270-GRN - Green Waste	498.23	4.54	62.89	30.88	162.39	102.92	479.50	237.40	141.72	119.42	1,839.89
280-GRS - Grass Clip	2.73	0.32	13.16	0.06	5.39	3.33	10.49	0.69	2.46	28.35	66.97
340-LVS - Leaves - D	7.15	0.48	33.73	3.03	6.84	4.49	18.04	1.40	3.30	43.21	121.67
350-MAN - Manure - L	10.89		1.80	1.12	0.16	9.14	6.32	3.34	6.10	23.05	61.92
440-PRN - Prunings	100.92	7.48	60.02	4.15	123.16	39.82	97.26	26.29	4.80	26.95	490.85
Grand Total	**1,193.36**	**12.82**	**353.41**	**400.26**	**917.43**	**163.52**	**731.81**	**896.68**	**359.67**	**465.87**	**5,494.80**

Customer type Commercial

Sum of Net TN Row Labels	Bena	Boron	Kern Valley	Lebec	McFarland	Mojave	Ridgecrest	Shafter	Taft	Tehachapi	Grand Total
1130-SGRN - Src Sep	4,754.46			61.37	266.52			1,992.94	320.81		7,396.10
1140-SGRS - Src Sep	7,429.13			1.44	147.60			703.61	55.40		8,337.17
1180-SLVS - Src Sep	144.80			1.28	28.50			64.60	8.59		247.72
1195-SMNR - Src Sep	337.25			170.29				616.84	16.40		1,140.78
1230-SPRN - Src Sep	806.31		859.15	15.76	177.51		239.56	1,214.47	248.47	179.50	3,740.73
240-GD - Garden Debri	43.64		1,325.95		0.64	2.57	121.22	8.46		14.50	1,516.98
270-GRN - Green Waste	4,614.81	36.40	215.22	206.37	230.39	516.61	2,505.76	2,456.93	1,020.50	318.07	12,121.04
280-GRS - Grass Clip	135.76	1.41	18.50		15.00	16.40	62.38	221.65	0.16	44.00	515.27
340-LVS - Leaves - D	20.60	0.44	92.74	2.08	4.43	4.73	13.39	6.85	0.81	24.47	170.53
350-MAN - Manure - L	194.14		22.10	279.15	3.34	86.15	363.08	204.58	13.50	734.96	1,900.98
440-PRN - Prunings	134.94	10.96	225.25	1.01	22.18	46.79	351.91	117.78	16.96	16.60	944.37
Grand Total	**18,615.84**	**49.21**	**2,758.91**	**738.75**	**896.11**	**673.25**	**3,657.30**	**7,608.66**	**1,701.56**	**1,332.09**	**38,031.64**