

Appendix A

Existing Conditions

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Introduction

The following existing conditions document is organized by first discussing the California legislation that was found to be relevant to HWMA and its Member Agencies (i.e., cities of Arcata, Blue Lake, Eureka, Ferndale, Rio Dell and, representing the unincorporated area, Humboldt County (“Unincorporated County”)) current and future roles in solid waste management. Next HWMA and Member Agencies’ current roles in the solid waste system are detailed, followed by a discussion of regional population and disposal and diversion.

California Legislation

AB 939

The Integrated Waste Management Act of 1989 (AB 939, Sher, 1989) includes the following major provisions relevant to HWMA and Member Agencies:

- **50 Percent Diversion Mandate:**
 - **Regulation:** Each city and county or Regional Agency¹ must achieve at least 50 percent diversion of solid waste from landfill.
 - **HWMA and Member Agency Current Role:** Individual Member Agencies are responsible for achieving the 50 percent waste diversion mandate required by AB

¹ A “Regional Agency” is a legal partnership of two or more cities or counties, formed with California Department of Resources Recycling and Recovery approval, specifically to meet AB 939 requirements. HWMA is currently not a CalRecycle-approved Regional Agency.

939. According to 2011 preliminary figures, five of the six Member Agencies are in compliance with this requirement.

- **Planning Documents:**

- **Regulation:** The following Planning Documents must be submitted to CalRecycle for approval:
 - ✓ Each city and county must submit a Source Reduction and Recycling Element (SRRE)²; Household Hazardous Waste Element (HHWE)³; and a Non-Disposal Facility Element (NDFE)⁴.
 - ✓ Each county or Regional Agency must submit a Countywide Integrated Waste Management Plan (CIWMP) or a Regional Integrated Waste Management Plan (RIWMP) that incorporates a summary plan; the Source Reduction and Recycling Element, Household Hazardous Waste Element, and Non-Disposal Facility Element from each jurisdiction in the county or Regional Agency; all applicable Regional Source Reduction and Recycling Elements, Household Hazardous Waste Elements, and an applicable Regional Siting Element (RSE) if Regional

² A SRRE identifies how a jurisdiction will meet the state’s waste diversion mandate.

³ A HHWE identifies programs for the collection, recycling, treatment and disposal of household hazardous waste.

⁴ A NDFE identifies new and existing facilities needed to implement a SRRE.

Agencies have been formed; and a Countywide Siting Element (CSE)⁵.

- **HWMA and Member Agency**
Current Role: All Member Agencies have submitted the required Planning Documents. The Unincorporated County has submitted a CIWMP and an update in 2006.
- **Quarterly Disposal Report:**
 - **Regulation:** Either a county or a Regional Agency must compile and submit quarterly disposal reports to CalRecycle.
 - **HWMA and Member Agency**
Current Role: HWMA submits quarterly disposal reports to CalRecycle on behalf of the Unincorporated County through a separate agreement with HWMA, and not as a consequence of HWMA being required to do so by AB 939.
- **AB 939 Annual Report:**
 - **Regulation:** Each jurisdiction (i.e., city, county, city and county, or Regional Agency) shall submit an AB 939 Annual Report that discusses the progress achieved in implementing the programs and/or facilities described in the jurisdiction's Planning Documents.
 - **HWMA and Member Agency**
Current Role: Each Member Agency is required to submit AB 939 Annual

Reports individually. HWMA submits the AB 939 Annual Reports on behalf of the City of Eureka and the County of Humboldt through individual agreements.

- **Financing:**

- **Regulation:** Authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated to be used to pay actual costs incurred in preparing, adopting and implementing integrated waste management plans, as well as in setting and collecting the local fees.
- **HWMA and Member Agency**
Current Role: An AB 939 Fee is assessed on all disposal tons in HWMA's jurisdiction. The fee is collected by HWMA and allocated among Member Agencies and Trinidad.

- **Permitting and Enforcement:**

- **Regulation:** Sets requirements that a local agency shall meet before being designated as a Local Enforcement Agency (LEA). Required the Board, in conjunction with an inspection conducted by a LEA, to conduct at least one inspection per year of each solid waste facility in the state.
- **HWMA and Member Agency**
Current Role: The Unincorporated County acts as the Local Enforcement Agency (LEA).

AB 341

In 2010, the State of California legislature passed Assembly Bill 341 (Chesbro), which set

⁵ A CSE identifies areas that may be used for the development of new disposal and transformation facilities.

a state-wide recycling goal of 75 percent by 2020, and required CalRecycle to issue a plan outlining strategies to meet that goal. There will be no change to the individual jurisdiction AB 939 compliance measurement; however, policy options developed by CalRecycle in response to AB 341 may impact jurisdiction diversion rates and program options. Preliminary drafts suggest that CalRecycle is considering changes to the way it currently calculates diversion, including disallowing certain materials that have traditionally counted towards a jurisdiction's diversion rate, such as alternate daily cover ("ADC") and alternative intermediate cover at California landfills, material transformed at California transformation facilities, and used-tire derived fuel at California facilities⁶.

HWMA Role

The Humboldt Waste Management Authority (HWMA) was formed in 1999 as a joint power of authority entity under provisions established by California Government Code Section 6500. A joint powers authority is a legal agreement between two or more jurisdictions to provide specific governmental services; in this case, the handling of solid waste generated within Humboldt County. The purpose of HWMA is to provide economical coordination of solid waste management services and efficiently and fairly assure against potential adverse effects of past solid waste management services within the service area.

⁶ CalRecycle. California's New Goal: 75% Recycling. May 9, 2012.

JPA Agreement

The Joint Powers of Authority agreement (JPA Agreement) was signed in 1999, by the cities of Arcata, Blue Lake, Eureka, Ferndale, Rio Dell and Unincorporated County. The JPA Agreement details the purpose of formation, awards flow control to HWMA, and establishes voting rights. These provisions are provided below.

Purpose of JPA Formation

The purpose of HWMA formation, as stated in Section 3 of the JPA agreement, is as follows:

- "...That they **SHALL** jointly request proposals and contract for disposal services"; and
- "...That they **MAY** jointly develop and fund programs to provide for the following:
 - Siting, permitting, developing, constructing, maintaining, operating, or contracting for the construction and / or operation of facilities;
 - Preparing and implementing an Integrated Waste Management Plan and other planning documents that meet the requirements of the ACT;
 - Disposal of waste and granting of franchises for waste hauling, as may be agreed to in writing and signed by any or all members; and
 - Planning, implementing and supervising programs which serve all or most jurisdictions, including facilities, special wastes and recycling market development."

It is important to note that HWMA was established to focus on disposal and not diversion, as the main function of HWMA (i.e., the only “shall”) stated in the JPA agreement is to arrange for disposal services. For HWMA to assume additional responsibilities and duties, the approval of the governing bodies of each Member Agency⁷ is required.

Flow Control

JPA Agreement Section 6.2 "Approved Powers" authorizes HWMA:

- “...h: to require the Members to use all best efforts to direct all Solid Waste generated within the members boundaries that are located within the service area to the landfill or transfer facility”; and
- “... i: to require Members to amend or revise any franchise collection agreement(s) at the earliest possible date, which shall not be later than the first renewal or extension date of the date of any amendment to such franchise agreement, to provide the member with the right to direct all waste collected by the franchised hauler to the landfill or transfer facility: to enforce the provisions of member's garbage collection agreements that require that all solid waste collected be delivered to the landfill or transfer facility.”

⁷ Section 6.3, “Possible Future Responsibilities and Duties”, of the Agreement, states that HWMA may conduct other waste management authorities and duties upon future approval and agreement by all Members, whereas “Members” is defined as the governing bodies of the Member Agencies.

Voting

Each Member Agency is allowed one Director on the Board and each Director is allowed one vote on all matters presented to the Board.

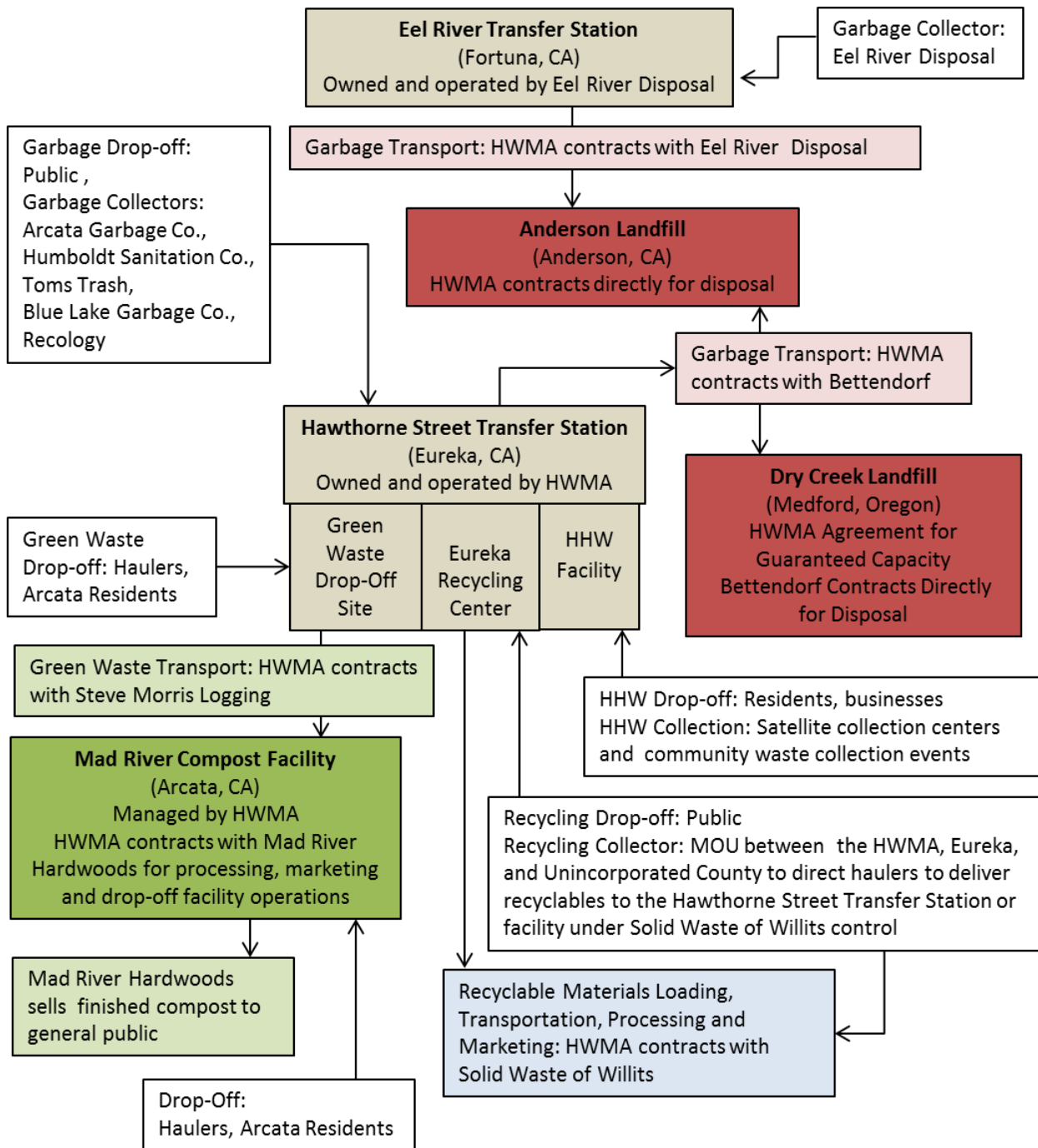
The vote of a majority shall constitute an act of the Board, except in the following, which require a 70 percent vote:

- The construction budget for any HWMA owned facility;
- Debt service on revenue bonds and the payment to the transfer station operator;
- The issuance, execution or delivery of revenue bonds;
- Any change in a budget exceeding 10 percent of the total amount of that budget;
- Any amendment to or the termination of this agreement;
- Voting rules regarding the approval of contracts between HWMA and any one or more Member Agencies;
- The admission of an additional Member Agency or a substitute Member Agency including by means of assignment; and
- The purchase of a landfill.

HWMA Programs and Facilities

Figure A.1, on the following page, illustrates the flow of materials throughout the HWMA service area. The diagram is followed by a description of individual programs and facilities that HWMA is responsible for.

Figure A.1
Waste Flow through HWMA Managed Facilities



Disposal

HWMA is given flow control⁸ of its six Member Agencies' solid waste.

Member Agencies' solid waste is delivered to two out-of-county landfills: Anderson Landfill in Anderson, CA and the Dry Creek Landfill in Medford, OR. HWMA contracts directly with Anderson Landfill for disposal; however, in regards to Dry Creek Landfill, the disposal agreement is between Bettendorf Enterprises (who provides transportation of the solid waste) and Dry Creek Landfill, with a separate agreement between HWMA and Dry Creek Landfill that guarantees Dry Creek Landfill will reserve sufficient solid waste disposal capacity at the landfill for HWMA.

In the case of both landfills, HWMA has entered into "put or pay" agreements that contractually requires HWMA to either "put" predefined minimum amounts of disposal annually at a fixed price or to "pay" for the shortfall (i.e., tip fee x tons short). While these "put or pay" clauses protect the disposal facility operators' guaranteed revenues, they put HWMA at risk for paying on non-delivered tonnage if it is not able to deliver the required amount of materials.

Tables A.1 and A.2 provide an overview of the contractual agreements related to Anderson Landfill and Dry Creek Landfill, respectively.

⁸ Under the JPA Agreement, Member Agencies must contractually require that franchised haulers deliver all solid waste to HWMA directed landfills or transfer stations.

Table A.1 Contractual Obligations Related to Disposal at Anderson Landfill⁹	
Disposal Agreement	
Term	January 1, 2003 to June 1, 2014
Tonnage Requirements	Minimum of 42,000 per year. For each additional 10,000 tons per year delivered to Anderson by HWMA (up to 72,000 tons per year), the disposal rate is decreased by \$0.50 per ton.
Charge	Increased annually based on 100 percent of the change in CPI.
Billings	Anderson bills HWMA directly for all tonnage tipped.
Transportation Agreements	
Bettendorf Enterprises, Inc.	HWMA contracts directly with Bettendorf Enterprises, Inc. to transport solid waste from the Hawthorne Transfer Station and from the Humboldt Sanitation facility in McKinleyville to Anderson. HWMA pays Bettendorf per trip. Transportation rates are adjusted annually based on 75 percent of the change in CPI and the fuel surcharge is adjusted monthly based on a fixed fuel price of \$3.00 per gallon. The agreement expires June 1, 2014.
Eel River Disposal	HWMA contracts directly with Eel River Disposal (ERD) to transport solid waste from the Eel River Transfer Station in Fortuna, CA to Anderson, CA. HWMA pays ERD per ton disposed, adjusted annually based on the change in CPI. The fuel surcharge is adjusted monthly based on a fixed fuel price of \$3.00 per gallon. ERD, in return, pays satellite facility fees per ton disposed, as reported in their billing for hauling

⁹ Agreements were initially executed between Waste Solutions Group (WSG) & Landfills. The Anderson Landfill Agreement was assigned to HWMA at the time of the WSG buyout by HWMA.

Table A.2 Contractual Obligations Related to Disposal at Dry Creek Landfill	
Landfill Disposal Capacity Guarantee Agreement between HWMA and Dry Creek Landfill	
Term	November 1, 2006 to November 1, 2016
Tonnage Requirements	HWMA is required by the agreement to direct at least 25,000 tons and no greater than 30,000 tons per year to the landfill.
Disposal Agreement between Bettendorf Enterprises, Inc. and Dry Creek Landfill	
Term	November 1, 2006 to November 1, 2016
Billings	HWMA pays Bettendorf the disposal fees that are invoiced from Dry Creek to Bettendorf. Deliveries in excess of the 30,000 ton ceiling are charged the gate rate.
Charge	Current fees are adjusted annually based on 100 percent of the change in CPI. Rates may be further adjusted based on various discounts and additional charges.
Transportation Agreement between HWMA and Bettendorf Enterprises, Inc.	
General	HWMA contracts directly with Bettendorf for transport from Hawthorne Transfer Station to Dry Creek and disposal.
Charge	HWMA pays Bettendorf for transportation services to Dry Creek. Transportation rates are adjusted annually based on 75 percent of the change in CPI and the fuel surcharge is adjusted monthly based on a fixed fuel price of \$3.00 per gallon.

Cummings Road Landfill

HWMA owns the Cummings Road Landfill, a 32 acre landfill outside the city limits of Eureka. During the 1930's Cummings Road Landfill was operated as a burn dump, and in 1969 was converted to an unlined cut and cover landfill. In 2000, the landfill was sold to HWMA by City Garbage (now Recology). The landfill ceased accepting waste before reaching its final capacity of 2,572,000 cubic yards. The last load of municipal refuse (excluding clean closure activities) was received on June 16, 2000. The landfill continued to receive minor amounts of inert soil and non-friable asbestos

until June 30, 2005; as of that date, the landfill no longer accepts waste.

The waste consists primarily of nonhazardous municipal refuse, with smaller amounts of ash from wood-fired power plants, construction and demolition waste, non-friable asbestos-containing waste, sewage sludge, and paper mill waste. Paper mill waste may include paper sludge, dregs and grits (calcium carbonate particles), and lime mud.

The landfill is currently in the process of being closed and will require ongoing post-closure maintenance for the next thirty years.

Hawthorne Street Facility

The Hawthorne Street Facility is owned and operated by HWMA and includes the Hawthorne Street Transfer Station, Eureka Recycling Center, and Permanent Household Hazardous Waste Facility. The facility is situated on six and a half acres of property. An undeveloped four acre parcel, which is comprised of two acres of wetlands, on the north side of Hawthorne Street, is also owned by HWMA.

The transfer facility is utilized by the public (self-haulers) and the majority of the county's garbage collectors to drop off mixed waste. Mixed waste delivered by franchised haulers and debris boxes (including construction and demolition debris) are dropped off in a separate area than that of self-haul loads. Where possible, HWMA staff separates and diverts salvageable materials from self-haul loads. A variety of materials, including construction related items, sporting good equipment, home furnishings and appliances, could be pulled from the tip floor; however, due to lack of space, intact and useable materials are often baled with other recyclables rather than set aside for potential reuse.

In addition, recyclable materials, including CRV materials, can be dropped off at Eureka Recycling Center, residents and qualifying businesses may drop off hazardous waste at the Permanent Household Hazardous Waste Facility, and residents can drop off green waste at the green waste drop-off site.

The Hawthorne Street Facility is fully developed and constrained for space between the three operations. Within the transfer station building itself, space is maximized between franchise and self-hauling garbage drop-off, drop-off and contaminant removal

for the pilot food waste program, salvage bins for self-haul recyclables, and curbside recycling drop-off along with the necessary heavy equipment operations for moving, sorting and loading of materials. Within the recycling center's building, space is also challenged due to self-haul recycling drop off bins, source separated cardboard, e-waste, universal waste, other recycling services, and baled materials.

In 2012, 59,571 tons of mixed waste were received and passed through the Hawthorne Street Transfer Station, accounting for over 80 percent of Humboldt County's waste. While a small amount of material recovery is able to occur through current floor sorting operations, HWMA does not mechanically process any loads to recover materials, and consequently is diverting a limited amount (about 370 tons in 2011).

Recyclables Processing

HWMA has an agreement with Solid Wastes of Willits (SWOW) for the loading, transportation, processing, and marketing of recyclable materials from the Hawthorne Street Facility. This five-year agreement expires September 5, 2016, with an optional two-year extension available if mutually agreed to by both parties. The agreement contains a 180-day cancellation clause at the option of HWMA, but does not, however, contain a cancellation option for SWOW. Per the agreement, SWOW pays a minimum of \$8.00 per ton of recyclable materials.¹⁰

A Memorandum of Understanding (MOU) was adopted in June 2011 between HWMA, the City of Eureka, and the County of Humboldt

¹⁰ This amount is adjusted quarterly by a revenue sharing plan using a weighted average Composite Market Value.

that requires Eureka and the County¹¹ to direct their franchised haulers to deliver recyclable materials to either the Hawthorne Street Transfer Station or to a facility under SWOW's control. It is at the discretion of other Member Agencies as to whether they enter into the MOU.

At the time that SWOW bid on the recycling contract, it was also transporting Mendocino County-generated wood waste (biomass) by truck to Eel River Power's biomass plant in Scotia, CA. SWOW proposed that, instead of returning to Willits empty, those trucks would back-haul recyclable materials from Hawthorne Street Facility, resulting in cost savings.

In October 2012, Eel River Power's biomass plant announced that it would be suspending activity due, in part, to potential regulatory changes and uncertainty in the market. Unless the Eel River Power's biomass plant resumes operations, or SWOW is able to obtain alternative backhaul sources, such as biomass customers, the company will continue to send empty trucks to the Hawthorne Street Facility to load the recyclable materials and transport the materials back to Willits. Higher transportation costs are not being passed on to SWOW's customers.

Existing in-county co-mingled, single stream recyclables processing capacity is currently limited to the Eel River Disposal and Resource Recovery's Material Recovery Facility (MRF) in Fortuna, CA. The former Arcata Community Recycling Center's Samoa MRF, which ceased operations in January 2012, is presently listed for sale by Umpqua Bank, and if purchased

¹¹ Due to the Unincorporated County's multiple collection franchise agreements, only certain haulers are directed to deliver recyclable materials to the appropriate facility.

with the intent of resuming processing operations, could be a future regional processing facility.

Household Hazardous Waste

HWMA's Household Hazardous Waste (HHW) program consists of the operation of the Permanent HHW facility (HHW facility) located at the Hawthorne Street Facility, the organization and operation of mobile HHW collection events during dry months (usually April through October), and staffing of a HHW Hotline.

California law prohibits hazardous waste and universal waste from being disposed of in the landfills and HWMA's HHW program was established to provide residents and businesses a way to safely and legally dispose of these materials, including paint, paint related materials, acids and bases, toxic solids and liquids (such as pesticides and pharmaceuticals), non-friable asbestos, universal wastes (such as fluorescent light bulbs and household batteries), electronic waste, and medical sharps. Legal limits define the quantities of hazardous waste that can be accepted.

A "load check" program is required by state regulations to be implemented at any permitted solid waste facility, to ensure that prohibited items, such as medical wastes and hazardous wastes, are being kept out of the municipal solid waste (MSW) stream and in turn, being kept out of MSW landfills. HWMA's HHW program equipment includes a Ford F-550 flatbed truck and a Dodge Ram pickup, which staff uses to pick up hazardous waste found during required "load checks" at permitted solid waste facilities throughout the county, including Eel River Disposal's transfer station in Fortuna, Unincorporated County's Redway Transfer Station, and Humboldt

Sanitation's transfer station in McKinleyville. By having a state hazardous waste transporter license/permit, HWMA staff is able to make periodic trips to retrieve the hazardous wastes found at other solid waste facilities. HWMA staff transports the hazardous waste back to the permanent facility on Hawthorne Street for waste identification, segregation, and packing for ultimate recycling or disposal by its various vendors.

In fiscal year 2012, costs of the HHW program was \$493,000. Funding for the HHW program is derived primarily from the HHW program fee charged on all solid waste generated in Member Agency jurisdictions (currently \$5.71/ton). The HHW program fee is a pass-through charge included in the solid waste tip fee and based on a fee schedule approved annually by HWMA's Board. Additional funding is received from the following sources:

- Fees charged to businesses and residents that drop-off hazardous waste;
- Grant funding awarded to HWMA from the state for the recycling of fluorescent bulbs and used motor oil; and
- Community Service Districts (CSDs) and some local tribes "cost-share" hazardous waste collection events, defraying collection expenses.

Satellite Collection Centers

With approval of HWMA, several satellite retail and transfer station facilities (satellite collection centers) around the county collect a combination of universal waste, including household batteries, electronic waste, fluorescent light bulbs, pharmaceuticals, and medical sharps from the public. These waste

materials have been banned from the trash in California and are considered hazardous.

The majority of pharmaceuticals, medical sharps, and fluorescent bulbs are shipped directly from participating retailers. However, batteries and some medical sharps and fluorescents are transported from satellite collection centers to the HHW facility at the Hawthorne Street Transfer Station by either HWMA staff or the satellite collection center's staff. HWMA also conducts periodic pharmaceutical and medical sharp drop-off events.

Shipping and disposal costs for universal wastes are funded through a combination of the HHW program fee, general solid waste tip fee revenue, and the following grants:

- Residential sharps collection from satellite collection centers is funded wholly by tip fees;
- Household battery collection from satellite collection centers, handled and shipped by HWMA, is funded wholly by tip fees; and
- Electronic waste collections and amnesties, audited by the state, are cost-neutral or revenue generators.
- Previous funding for fluorescent lamp recycling, received from PG&E, expired at the end of calendar year 2012. Subsequent funding strategies such as retailer cost share or full costs covered through solid waste tip fees are being explored.

Green Waste

The Mad River Compost Facility, located on West End Road outside the city limits of Arcata, CA, is managed by HWMA under a services agreement. Mad River Compost

Facility is permitted to accept green materials only and approximately 5,000 tons per year is received. The following table outlines HWMA's

contractual agreements relative to Mad River Compost Facility.

Table A.3 Agreements Relative to Mad River Compost Facility	
Property Lease Agreement	
HWMA leases approximately three acres from Mad River Hardwoods Inc. on the north-eastern outskirts of Arcata, adjacent to Wes Green Landscaping. The site has been improved by HWMA, and HWMA has an option to purchase the real property. The lease is currently month-to-month.	
Drop-Off Facility	
HWMA contracts with Mad River Hardwoods Inc. to operate the drop-off facility. HWMA reviews customer drop off activity at the compost facility and invoices Mad River Hardwoods at \$90/ton. This agreement expires June 30, 2013.	
Processing	
HWMA contracts with Mad River Hardwoods Inc. to process green waste delivered to the facility. HWMA pays Mad River Hardwoods a \$50/ton green waste handling and processing fee. Mad River Hardwoods Inc. is permitted to market the finished material. HWMA does not receive any proceeds from the marketing of finished compost. The agreement expires on June 30, 2013; however, the agreement will automatically renew for a seven-year term, unless Mad River Hardwoods is in violation of the provisions of the agreement or does not opt to renew.	
Transfer	
HWMA contracts with Steve Morris Logging to haul green waste from the Hawthorne Street Transfer Station to the Mad River Compost Facility. HWMA pays Steve Morris Logging an approximate rate of \$18/ton for green waste hauled to the compost facility. HWMA is charged approximately \$30/ton for hauling and grinding wood loads ¹² . This is hauled to bio-mass facilities. This agreement expires June 30, 2013.	
Arcata Free Drop-Off	
HWMA contracts with the City of Arcata to allow Arcata residents and businesses who show proof of curbside garbage service to drop off materials at the facility at no cost. Arcata pays HWMA a flat amount per year for these services. This agreement expires December 31, 2013.	

¹² Approximately 5 percent of green waste collected at Hawthorne Street Transfer Station is clean wood (e.g., pallets and lumber).

The following are green waste flows to and from Mad River Compost facility:

- Customers who drop off green waste and clean wood waste at the Hawthorne Street facility are charged a reduced tip fee, compared to the garbage tip fee. Green wastes are stored in a bunker and then loaded by HWMA personnel into debris bins, which are transferred by Steve Morris Logging to the Mad River Compost Facility.
- Arcata residents and businesses and the collection handling companies may take the green waste directly to Mad River Compost Facility. A direct tipping fee is charged to collection handling companies and the disposal rate for Arcata residents is subsidized by the City of Arcata.
- Once the materials are delivered to the Mad River Compost Facility, they are chipped, ground, and composted on-site by the operator, Wes Green Landscape Materials, Inc.
- Wooden pallets received at Mad River Compost Facility are examined for usability. Pallets in good condition are sold to local manufacturers for reuse, and the remainder is chipped, ground, and transported to one of the local biomass plants where the ground wood is sold to be burned as fuel.

Food Waste Diversion Pilot Program

HWMA is conducting a food waste diversion pilot program, designed to evaluate the effectiveness of source separated food diversion and collection for alternative use in compost and/or anaerobic digestion. The work was made possible through an Environmental

Protection Agency (EPA) Climate Showcase Communities grant. The program, conducted since 2011, collects food waste from commercial producers within the City of Eureka and Humboldt State University (HSU) in Arcata. Recology of Humboldt County collects the food waste from Eureka and Arcata Garbage Company collects food waste from HSU. Both haulers deliver the food waste to Hawthorne Street Transfer Station where a compostable materials receiving area has been temporarily established. Non-food contaminants are manually removed and the compostable material is transported to the nearest permitted food waste compost facility, Cold Creek Compost in Ukiah, CA.

HWMA sends food waste to Cold Creek Compost to provide quantifiable food waste diversion while the anaerobic digester project is developed. Costs for this program are influenced by the quantity of food waste received, quantity of wood waste and ash diverted, and the availability of a backhaul.

As of January 2013, there are approximately 45 program participants and HWMA staff continues to recruit adopters and expand collection activities.

Continue Development of the Anaerobic Digestion Treatment System Project

Food waste is a large component of landfilled waste that, when placed in a landfill, contributes to the formation of methane (a greenhouse gas) and leachate (a liquid byproduct that can pollute surface and groundwater). HWMA is currently working with the City of Eureka to conduct an anaerobic digestion treatment system project with the intent to divert food waste from the landfill and convert it into renewable energy and fertilizer through anaerobic digestion.

Anaerobic digestion is a biological process in which organic matter is broken down by microorganisms in the absence of oxygen. Anaerobic digester systems can be in many forms, but are usually a series of heated tanks that are loaded and unloaded via pumps. The process produces biogas, comprised of methane and carbon dioxide, and a stabilized liquid and solid residual. The biogas is a source of renewable energy that can be converted into heat, electricity, or vehicle fuel. The residual liquid and solid material can be used to produce an agricultural fertilizer. Properly designed, the anaerobic digestion process has a positive net energy balance, which means that it generates more energy than it needs to operate. Therefore, the excess renewable energy and fertilizer products could be sold to generate revenues that can help to offset the cost of food waste processing.

When compared to traditional aerobic composting, anaerobic digestion is: less odor producing and therefore able to be sited near the population centers that generate the food waste; requires a shorter processing time; has the ability to produce biogas used for energy whereas traditional aerobic composting does not; and has near complete containment of emissions. However, anaerobic digestion systems involve more expensive capital costs compared to traditional aerobic composting, require a consistent supply of organic feed material, and are not well suited to process woody biomass.

The following timeline outlines key events in the development of the anaerobic digestion treatment system project:

- May 2010 - Food Waste Diversion Feasibility Study completed.
- January 2011 - Humboldt Regional Food Waste Digester Initial Study and

Mitigated Negative Declaration completed.

- September 2012 - Request for Proposals (RFP) for Professional Design Services for the Development, Installation, Start-up, and Commissioning of an Anaerobic Digestion System released.

Following the results of the RFP solicitation, HWMA intends to release a separate RFP for the design and construction of the remainder of the anaerobic digestion facility.

Funding for the project has come primarily from solid waste tip fees and (one time) City of Eureka and PG&E contributions.

Public Education

HWMA conducts outreach to educate the public on services that HWMA provides and select diversion services provided by other entities. Funding for the outreach program is provided by solid waste tip fees, AB 939 fees, and grants received from the state. The following are educational materials produced by HWMA:

- Recycling section in local AT&T yellow pages (“Green Pages”) on curbside hauling companies, hazardous waste collection, and recycling information on buyback centers, used oil, and other materials. This is a regional project with other public agencies.
- Tri-fold brochures on proper waste disposal for hazardous wastes, oil, and pharmaceuticals.
- Publicity of hazardous waste collection events using T.V., radio, and print advertisements, PSA’s’ and radio and TV interviews.

- HWMA website at <http://www.hwma.net/>, which contains webpages on the Hawthorne Street Transfer Station, Eureka Recycling Center, hazardous waste, mobile material collection events (i.e., hazardous, e-waste, tires, etc), food waste, FAQs, useful resources, recycling curbside collection and drop-off programs, Board agendas / packets, meeting videos, strategic planning, and employment.
- Until temporarily suspended in 2011, HWMA also contracted for K-12 recycling education in County class rooms and led tours of the Hawthorne Street facility. These educational programs will likely be resumed in 2013.

CalRecycle Grant Administration

HWMA was awarded and currently administers the following three CalRecycle program grants:

- Used oil recycling grant;
- Tire recycling grant; and
- Beverage container recycling grant.

Additionally, HWMA has successfully obtained two competitive state HHW grants since 2002, which have provided funding for the construction and upgrades to the permanent HHW facility at Hawthorne Street. It is anticipated that additional CalRecycle HHW grant opportunities could help to defer the cost of needed upgrades to the HHW facility and equipment replacement.

CalRecycle requires that each of these three grants be managed by a public agency rather than private industry. HWMA applies for used oil and tire recycling grants on behalf of its Member Agencies, with services covering

these respective geographic areas. HWMA applies for the beverage container recycling grant on behalf of unincorporated Humboldt County.

Used oil grant funds were \$25,000 in fiscal year 2012. Funds are used for supporting used oil and oil filter collection by covering some equipment expenses, providing claims assistance, HWMA staff training, and oil and filter recycling outreach and education. Funds are also spent preventing storm water contamination by purchasing filtering media for storm drains, purchasing spill kits, funding oil/water separator cleanouts, and by helping to fund the outreach and education activities of the North Coast Stormwater Coalition.

The tire recycling grant is intended for the proper disposal of household tires. Funding for fiscal year 2012 was \$50,000¹³. HWMA has solicited cost-share funding from non-member agencies (e.g., tribal agencies) who deliver tires at tire amnesty events.

The beverage container grant funds classroom education on waste reduction and recycling bins at areas in Unincorporated County but benefits all county residents when recycling receptacles are used at venues, such as Redwood Acres. Beverage grant funds were approximately \$19,000 in fiscal year 2012.

¹³ This grant is not to be confused with the tire cleanup and enforcement grant offered by CalRecycle, which assists in defraying the cost of cleaning up sites with large numbers of waste tires. HWMA is not an enforcement agency and would not be an appropriate grant applicant. Enforcement is the responsibility of County Environmental Health, who since 2009 has declined management of this grant. However, it is possible that HWMA could assist in obtaining the grant in the future if there was interest by an appropriate agency.

AB 939 Disposal Reporting

AB 939 (see Section 1.2.1, AB 939) requires that each county in California must compile and submit quarterly disposal reports to CalRecycle. HWMA currently submits the quarterly disposal reports to CalRecycle on behalf of Humboldt County through a separate agreement with HWMA, and not as a consequence of HWMA being required to do so by AB 939.

This requires HWMA to collect disposal tonnage data from transfer stations located in Humboldt County and from landfills where solid waste generated in Humboldt County is transported (including self-hauled). HWMA then aggregates the data and allocates a portion to the Unincorporated County and to each of the seven cities located in Humboldt County.

Administrative expenses for disposal reporting are covered by a percentage HWMA's and Humboldt County's share of the AB 939 Fee. The AB 939 Fee (\$2.71/ton) is included in the County-wide Program Fee that is charged on all solid waste disposed of within the County (see Section 1.3.3, Funding).

Extended Producer Responsibility / Product Stewardship Program Initiatives

Extended Producer Responsibility (EPR) and Product Stewardship are terms used interchangeably to describe a long-term solution to manage waste products by shifting the responsibility and costs for collection, transportation, and end-of-life management of those products away from local governments and general rate/taxpayers to the producer or brand owner.

HWMA is a member of California Product Stewardship Council (CPSC). CPSC is the main lobbying agency in California for EPR initiatives

and was instrumental in the passing of two EPR bills in California that target paint and carpet. HWMA has since also implemented paint and carpet product stewardship initiatives.

Carpet Stewardship

The purpose of the California Carpet Stewardship Program (AB 2398) is to increase diversion and recycling of carpet. The law generates funding through an initial assessment of five-cents per square yard of carpet sold in California.

Carpet America Recovery Effort (CARE) is the stewardship organization administering the California Carpet Stewardship Program and, as part of that responsibility, is currently conducting a Rural Counties Pilot Project of which Humboldt County is a participant. The aim of the program is to evaluate a carpet recycling model in six rural counties of California to determine if the model may be successful, economically feasible, and provide a cost savings versus landfilling carpet. The model includes dropping a trailer at a preselected location (Hawthorne Street Transfer Station) for collecting and transporting carpet to recycling processors, educating consumers and installers, and providing measureable results. HWMA's role in this pilot project is to supervise the handling and loading of carpet, to assist in data collection, and in the education of consumers and installers.

The costs associated with the pilot program are covered by AB 2398 assessments.

Paint Stewardship

The Paint Stewardship Law (AB 1343) established a state-wide Paint Stewardship Program, to reduce the generation, promote the reuse, and manage the end-of-life of

architectural paint in an environmentally sound fashion, including collection, transportation, processing, and disposal. PaintCare is the stewardship organization administering the Paint Stewardship Program. The law generates funding through a “PaintCare Recovery Fee” added to the purchase price of architectural paints and coatings sold in California¹⁴.

The program requires that manufacturers (either individually or through the stewardship organization (i.e., PaintCare)), design their own stewardship program. Other service providers, such as HHW management contractors, local HHW programs, and/or retailers, participate in the program as negotiated through the manufacturer or stewardship organization.

HWMA is in the process of negotiating a collection agreement with PaintCare, as paint is HWMA’s largest hazardous waste expense and the program may help fund paint collection, transportation, and recycling. Two private retailers in Humboldt County have already begun participating in PaintCare’s program.

Funding Sources

HWMA is funded primarily through tip fees that are collected on materials disposed at the Hawthorne Street Transfer Station¹⁵. These tip fees are used to fund operations, capital improvements, transport, and disposal costs, and are also used to support programs that are not self-sustaining (i.e., programs that do

not generate sufficient revenues to support activities or services themselves).

Added to the base tip fee charged on disposal tons entering Hawthorne Street Transfer Station, is a Countywide Programs Fee. The Countywide Programs Fee is also assessed on each ton of materials disposed in the jurisdictional boundary of HWMA, and charged to all franchised collectors, non-franchised collectors, and self-haul customers who haul solid waste from HWMA Member Agencies. The portion of the Countywide Programs Fee retained by HWMA funds four county-wide programs that are administered by HWMA, discussed in more detail below. Countywide Programs Fees are examined each year through the budgetary process, and evaluated and revised annually. In the adopted FY 2012-13 Budget, Countywide Programs Fees were set at \$24.67 per ton of material.

Total costs to dispose of materials in FY 2012-13 are as follows:

- \$146.31 per ton for self-haul customers (\$121.64 base tip fee + \$24.67 Countywide Programs Fee); and
- \$120.23 per ton for franchised collectors (\$95.56 base tip fee + \$24.67 Countywide Programs Fee).

Revenues are also received from activities related to diversion, including green and food waste revenues, recyclables handling and salvage fees, and hazardous waste and cleanup event disposal fees. These fees partially offset actual costs incurred through the handling and transport of material, while remaining low enough to promote use of the various programs offered to the public.

Note that some diversion program costs are supported by tip fees. In particular, CRV buy-back services are paid for with tip fee revenue.

¹⁴ The fees are paid to PaintCare by paint manufacturers, then passed down to retailers and eventually consumers.

¹⁵ A tip fee is the amount charged on the volume or weight of materials received at a solid waste facility.

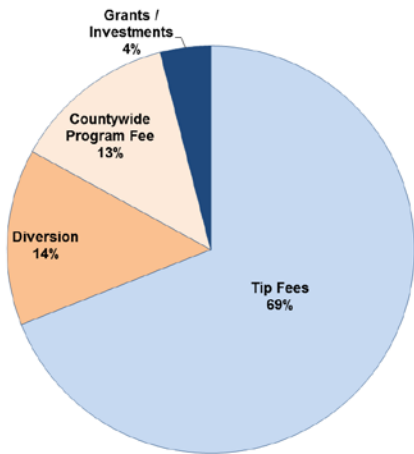
In January 2010, HWMA staff estimated that the net annual cost of CRV buy-back services provided at Hawthorne Street Transfer Station was approximately \$60,000.

Additional funds are generated through successful grant applications and by interest revenue generated from principal funds held in a HWMA landfill closure trust fund. These funds are used to offset general operating expenses and can vary widely from year to year.

It should be noted that at the time of formation, HWMA implemented a relatively simple accounting system. That system remains the same despite changes as HWMA has established expanded and diversified programs since its formation.

Figure A.2, below, illustrates the makeup of total HWMA funding estimated in FY 2012/13.

Figure A.2
Estimated HWMA Revenue Sources for Fiscal Year 2012-2013¹⁶



As shown above, tip fee revenues account for approximately 69 percent of overall revenues,

¹⁶ HWMA FY 13 Budget

and Countywide Program Fees account for about 13 percent. Together, this illustrates that 82 percent of HWMA revenues are directly dependent on the amount of solid waste entering the Hawthorne Street Facility; thus, if diversion programs are successful and disposal tons decrease, the revenues HWMA receives will decrease correspondingly.

Figure A.3 demonstrates the decrease in disposal tonnages that were captured and applied to the Countywide Program Fee and tip fee between 2004 and 2011. As shown there has been a decrease in the disposed tons captured of approximately 29.84 percent (26,073 tons).

Figure A.3
Captured Tons Applied to the Countywide Program Fee and Tip Fee (2004-2011)

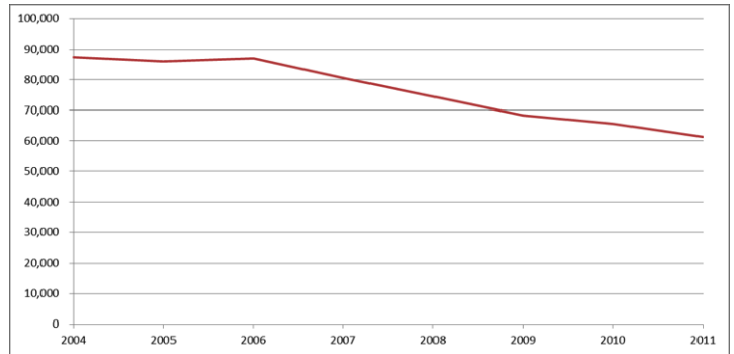


Figure A.4 demonstrates the total revenues generated from the Countywide Program Fee and tip fee between 2005 and 2011. Table A.4 demonstrates the Countywide Program Fee per year between fiscal year 2005/06 through fiscal year 2012/13.

Figure A.4
Total Revenue from Countywide Program Fee and Tip Fee (2005-2011)

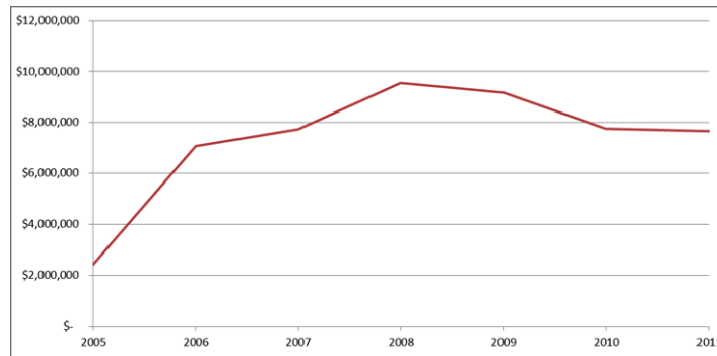


Table A.4 Countywide Program Fees Per Ton (FY 2005/06- FY 2012/13)							
2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
\$ 9.02	\$ 9.39	\$18.10	\$25.14	\$27.67	\$ 24.67	\$ 24.67	\$ 24.67

Tip fees not only support costs associated with facility maintenance, solid waste disposal and transportation costs incurred by HWMA, but also support other HWMA programs. The Countywide Programs Fees are charged on

disposal tons but only some of the allocated funds support disposal activities.

Table A.5 shows the breakdown of the Countywide Programs Fee during FY 2012/13 and a short description of the individual fees.

Table A.5 Countywide Programs Fees		
Fee	Fee Description	Amount per Ton
Household Hazardous Waste Program	Retained by HWMA and used to fund the collection and disposal of HHW within the jurisdictional boundaries of HWMA ¹⁷ .	\$5.71
Cleanup/Enforcement Program	Primarily passed through to Unincorporated County (80 percent) for funding the illegal dumping cleanup, abatement and enforcement; 20 percent is retained by HWMA. The amount retained by HWMA is placed into a fund that is available to approved individual, community groups or haulers, who pick up illegally dumped materials and deliver them to Hawthorne Street Facility.	\$0.57
City/County AB 939 Recycling Program	Collected by HWMA, with HWMA retaining a portion and distributing the rest among each of the six Member Agencies (and for an interim period, the City of Trinidad) to support AB 939 requirements.	\$2.46
Table Bluff Landfill Maintenance	Remitted to the County to help fund on-going maintenance costs related to the closed Table Bluff Landfill.	\$0.50
County Local Enforcement Agency (LEA)	Remitted to the County and used to assist in the permitting and inspection of all solid waste facilities in Humboldt County.	\$2.66
Administration	This fee is retained by HWMA to support the administration related activities of HWMA.	\$5.34
Cummings Road Maintenance	Retained by HWMA to fund closure and post-closure activities of Cummings Road Landfill.	\$4.67
Rural Container Program	Retained by HWMA to provide funding to the rural container program, which provides collection activities from container sites located in remote areas of unincorporated Humboldt County.	\$2.76
Total		\$24.67

¹⁷ It should be noted that the HHW Program Fee has not been raised significantly even though costs have risen as the state mandates more materials banned from the trash; consequently, tipping revenues have also been used to provide HHW program support.

HWMA Role Compared to Other JPAs

A comparison of HWMA’s roles relative to other waste authorities located in California is presented in Table A.6. As illustrated, the existing scope of HWMA responsibilities is comparable to other JPAs in California. For instance, most JPAs conduct some level of AB

939 solid waste planning, public education, and HHW program management. However, HWMA is the only JPA in the comparison whose main role includes contracting for disposal services.

Table A.6 Roles of California JPAs									
Role	Humboldt WMA	Sonoma County WMA	Stop-waste.org	Yuba- Sutter Regional WMA	Sacramento Regional SWA	South Bayside WMA	Central Contra Costa WMA	West Contra Costa WMA	Merced County Regional WMA
AB 939 Solid Waste Planning	✓	✓	✓	✓	✓	✓	✓	✓	✓
AB 939 Regional Reporting		✓		✓	✓		✓	✓	
Staff Assistance	✓				✓	✓	✓	✓	✓
Collection Contracting				✓		✓	✓		
Disposal Contracting	✓								
MRF/TS Contracting	✓					✓	✓	✓	✓
Facility Operations	✓								✓
Solid Waste Flow Controls	✓			✓		✓	✓	✓	✓
Divertible Materials Flow Control				✓		✓		✓	
Public Education	✓	✓				✓	✓	✓	✓
HHW Program Management	✓	✓	✓		✓	✓	✓	✓	

Member Agency Role

There are six Member Agencies in HWMA and each has one appointed representative on the Board. Member Agency roles include the following:

- Administer their respective franchise agreements with solid waste collection companies and approve collection rates;
- Decides what curbside services are offered;
- Conduct AB 939 reporting (excludes Unincorporated County and Eureka who contract with HWMA for the service);
- Adopt and enforce ordinances; and
- Implement programs, unless the Member Agency seeks HWMA's assistance.

Franchised Collection Services

Member Agencies independently contract collection services for residential, multi-family and commercial services in their respective jurisdictions. Each Member Agency currently contracts with a single hauler for franchised services, with the exception of Unincorporated County, which is serviced by five franchised haulers.

The existing collection franchise agreements executed by each of the Member Agencies generally include a number of important terms and conditions. There are, however, two significant areas of concern regarding the current collection franchise agreements:

1. **Lack of Diversion Requirements:** None of the Member Agencies' collection franchise agreements contain provisions for diversion requirements. Because the franchised haulers control the majority of the waste flow, a substantial benefit in terms of diversion could be realized if diversion requirements were contractually agreed upon.
2. **Term Length:** With the exception of Rio Dell, which has a franchise contract ending in 2016, the majority of the contract term lengths do not conclude until after 2020, the date that California established for its 75 percent diversion goal (Assembly Bill 341 (Chesbro), refer to Section 1.2.2, AB 341). While AB 341 does not place requirements on local governments above the current 50 percent diversion mandate, the term of the current agreements limits Member Agencies' ability to negotiate from a position of strength with respect to any desired contractual changes. Table A.7, below, documents the length of current franchise agreement terms.

Table A.7 Franchise Agreement Terms					
Jurisdiction	Start Date	Initial Term (years)	Initial End Date	Optional Extension (years)	Extended End Date
Incorporated Areas					
Arcata	2009	15	2024		
Blue Lake	2009	10	2019	5	2024
Eureka	2010	10	2020	9	2029
Ferndale	2006	14	2020	5	2025
Rio Dell	2007	9	2016		
Unincorporated Areas					
Arcata (Bayside / Jacoby Creek)	2011	10	2021	5	2026
Blue Lake / Fieldbrook	2011	9	2020	5	2025
Greater Eureka Area	2011	9	2020	5	2025
Holmes / Redcrest	2011	9	2020	5	2025
Garberville/Redway	2011	9	2020	5	2025
Fortuna / Ferndale	2008	10	2018	5	2023
Weott / Myers Flat	2010	10	2020	5	2025
McKinleyville / Westhaven / Orick / Orleans	2012	19	2031	5	2036
Willow Creek	2011	10	2021	5	2026

Service requirements also differ throughout the Member Agencies' service areas. The cities of Eureka¹⁸ and Arcata¹⁹ require all occupied properties (residential and commercial) in the city limits to subscribe to garbage and recycling collection service provided by the franchised hauler; however, the remaining Member Agencies do not, enabling people to either sign up for curbside services where available, self-haul their material directly to an approved transfer facility, or a mixture of both curbside and self-hauling. Curbside services that are offered to customers also vary widely throughout the Member Agencies with respect to the service levels (i.e., container size and frequency) and materials collected.

Current and Projected Population

Table A.8, below, contains the 2012 population estimates for Humboldt County from the California Department of Finance.

Table A.8 Department of Finance 2012 Population Estimates	
Jurisdiction	Population
Arcata	17,752
Blue Lake	1,255
Eureka	26,960
Ferndale	1,362
Fortuna	11,840
Rio Dell	3,344
Trinidad	364
Balance Of County	71,710
Incorporated	62,877
County Total	134,587

The population growth of Humboldt County over the past 36 years has been slower than that of both California and the nation. From 1970 to 2006, the population increased at an annual average rate of 0.7 percent.²⁰ Table A.9 projects the population based on an annual population increase of 0.7 percent. As shown, the population is projected to grow to 152,593 in 2030, which represents an overall increase of 13 percent from the 2012 estimated population.

¹⁸ The City of Eureka has an exclusion that allows customers to "opt out" of mandatory service. This includes owners of vacant property, owners of parcels with residential and other structures that are vacant for more than one month, owners of parcels that cannot reasonably be serviced due to inadequate access, or persons who legally recycle and/or composts virtually all their solid waste.

¹⁹ The City of Arcata has an exclusion that allows customers to "opt out" of mandatory service. This includes owners of unimproved parcels, owners of parcels with residential and other structures that are vacant for more than two months, owners of parcels that cannot reasonably be serviced due to inadequate access, and persons who legally recycle and/or compost virtually all their solid waste.

²⁰ Headwaters Economics. "A SocioEconomic Profile Humboldt County, California". February 13, 2009.

Table A.9 Projected Population of Humboldt County	
Year	Population
Estimated 2012	134,587
Projected 2015	137,433
Projected 2020	142,311
Projected 2025	147,362
Projected 2030	152,593

Humboldt County’s major population centers include the cities of Eureka, Arcata, McKinleyville, and Fortuna.

Regional Diversion and Disposal

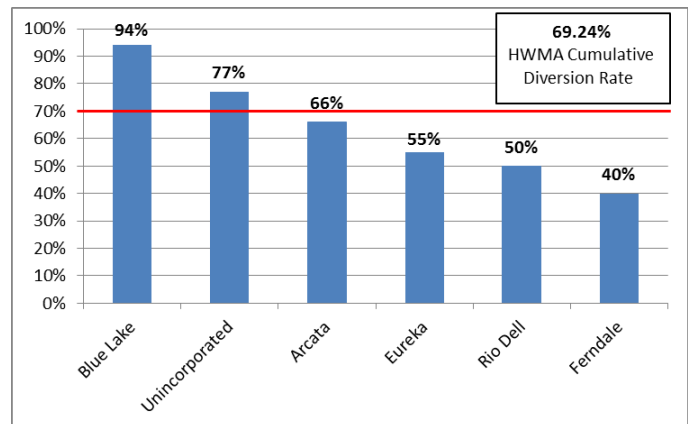
Over the past 13 years, HWMA has taken on a number of specific diversion related activities and programs; however, the majority of local waste diversion activities are still being implemented by HWMA’s individual Member Agencies through their local franchise hauling agreements. Accordingly, HWMA manages the state-mandated quarterly reporting of disposal tonnages on behalf of Member Agencies, and the Member Agencies measure diversion individually through AB 939 Annual Reports.

Figure A.5 illustrates HWMA Member Agencies’ 2011 CalRecycle preliminary diversion rates, and the calculated HWMA regional diversion rate of 69.24 percent²¹. Five of the six Member Agencies are currently in

compliance with AB 939 diversion requirements (i.e., 50 percent diversion of solid waste from landfills).

Table A.10 shows the amount and the percentage of tons disposed contributed by each Member Agency to the total HWMA tons disposed in 2011. It should be noted that on a regional basis, the largest gains in diversion will come from Member Agencies that contribute the most to the total HWMA disposal amount.

**Figure A.5
Member Agency 2011 Preliminary Diversion Rates**



²¹ Should other entities, including Trinidad or Fortuna, be included in the regional diversion target, this cumulative regional diversion rate would be changed.

Table A.10 Member Agency 2011 Disposal Tonnages		
Jurisdiction	2011 Tons Disposed	% of Total HWMA 2011 Tons Disposed
Arcata	8,106	10%
Blue Lake	582	1%
Eureka	29,190	37%
Ferndale	2,639	3%
County	37,252	47%
Rio Dell	1,313	2%
Total HWMA Tons Disposed	79,082	100%