



# COUNTY of MARIPOSA

P.O. Box 784, Mariposa, CA 95338 (209) 966-3222

ROBERT C. STEWART, CHAIRMAN  
PATTI A. REILLY, VICE-CHAIRMAN  
DOUG BALMAIN  
GARRY R. PARKER  
BOB PICKARD

DISTRICT III  
DISTRICT I  
DISTRICT II  
DISTRICT IV  
DISTRICT V



## MARIPOSA COUNTY BOARD OF SUPERVISORS

### MINUTE ORDER

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TO: SUPERVISOR PICKARD  
FROM: MARGIE WILLIAMS, Clerk of the Board *MW*  
SUBJECT: Letter Supporting AB 1400 to the Governor  
Resolution No. 02-337

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THE BOARD OF SUPERVISORS OF MARIPOSA COUNTY, CALIFORNIA,

ADOPTED THIS Order on August 27, 2002

#### ACTION AND VOTE:

- Supervisor Pickard initiated discussion relative to sending a letter to the Governor supporting AB1400, the County's Co-compost project legislation. (M)Pickard, (S)Balmain, the Board waived the rules requiring 72 hours agenda noticing to consider this matter finding it is a matter of timeliness due to the legislative process timeframes and that it was not known about at the time the agenda was prepared/Ayes: Unanimous. Following discussion, (M)Pickard, (S)Balmain, Res. 02-337 was adopted approving a letter to be signed by the Chairman to the Governor supporting AB1400. Further discussion was held. Ayes: Unanimous.

cc: File

BILL NUMBER: AB 1400 ENROLLED  
BILL TEXT

CC: BOB  
C/CAL  
V. U.S.D.

PASSED THE ASSEMBLY AUGUST 21, 2002  
PASSED THE SENATE AUGUST 19, 2002  
AMENDED IN SENATE AUGUST 14, 2002  
AMENDED IN SENATE AUGUST 5, 2002  
AMENDED IN SENATE JUNE 20, 2002  
AMENDED IN ASSEMBLY MAY 31, 2001  
AMENDED IN ASSEMBLY APRIL 25, 2001  
AMENDED IN ASSEMBLY APRIL 16, 2001  
AMENDED IN ASSEMBLY MARCH 28, 2001

HERE IS OUR BILL. IT IS  
ON ITS WAY TO GOV. DAVIS FOR  
HIS SIGN. I WILL PREPARE  
A LETTER OF SUPPORT FOR THE  
CHAIRS SIGN. AS AN OFF-AGEND  
ITEM FOR TUES AUG. 27, 2002.

INTRODUCED BY Assembly Member Cogdill  
FEBRUARY 23, 2001

An act relating to solid waste.

F.Y.I. Bob P.

LEGISLATIVE COUNSEL'S DIGEST

AB 1400, Cogdill. Mixed solid waste composting facility.

(1) Existing law, the California Integrated Waste Management Act of 1989, establishes an integrated waste management program administered by the California Integrated Waste Management Board. Under existing law, the act requires each city, county, city and county, and regional agency, if any, to develop a source reduction and recycling element of an integrated waste management plan containing specified components. On and after January 1, 2000, the element is required to divert 50% of the solid waste subject to the element, except as specified, through source reduction, recycling, and composting activities.

This bill would require the County of Mariposa, by July 1, 2003, to submit a report to the board concerning the county's progress in funding, constructing, and operating a mixed solid waste composting facility in cooperation with Yosemite National Park, thereby imposing a state-mandated local program by imposing a new duty upon the county.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

(3) This bill would make these provisions inoperative on July 1, 2003, and would repeal them as of January 1, 2004.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:

(a) The County of Mariposa, in cooperation with Yosemite National Park, are working to find a viable solution to divert, from landfill disposal, 50 percent of the region's generated solid waste, as required by the California Integrated Waste Management Act of 1989.

(b) The County of Mariposa and Yosemite National Park annually generate approximately 13,000 tons of mixed solid waste, 600 tons of biosolids, and 180,000 gallons of septage.

(c) The County of Mariposa and Yosemite National Park are proposing to secure a unique type of composting facility that would decompose mixed solid waste and would produce a dry, stable, and

inert material.

SEC. 2. On or before July 1, 2003, the County of Mariposa shall submit a report to the California Integrated Waste Management Board concerning the county's progress in funding, constructing, and operating a mixed solid waste composting facility in cooperation with Yosemite National Park. The report shall include, but need not be limited to, information regarding all of the following:

(a) Local, state, and federal requirements for the project, status of compliance with the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code), and permits received.

(b) Technical and economic feasibility, and cost-effectiveness, of the project.

(c) Adverse environmental impacts of the project, and alternatives and mitigation measures for those impacts.

(d) Environmental and public policy benefits of the project, including, but not limited to, landfill avoidance, pollution prevention, and sustainability, including, but not limited to, information regarding whether the project is the most economical and environmentally sound method to divert 50 percent of all solid waste from landfill or transformation through source reduction, recycling, and composting, as required under paragraph (2) of subdivision (a) of Section 41780 of the Public Resources Code, and to exceed that requirement pursuant to subdivision (b) of Section 41780 of the Public Resources Code.

(e) Programs and projects to ensure that noncompostable materials will be properly reduced, reused, and recycled.

(f) Mariposa County and Yosemite National Park education programs for diverting solid waste from landfills.

SEC. 3. This act shall become inoperative on July 1, 2003, and, as of January 1, 2004, is repealed, unless a later enacted statute, that becomes operative on or before January 1, 2004, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC. 4. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs that may be incurred by a local agency or school district are the result of a program for which legislative authority was requested by that local agency or school district, within the meaning of Section 17556 of the Government Code and Section 6 of Article XIII B of the California Constitution.

# Mariposa County Board of Supervisors

District 1.....PATTI A. REILLY  
District 2.....DOUG BALMAIN  
District 3.....ROBERT C. STEWART  
District 4.....GARRY R. PARKER  
District 5.....BOB PICKARD



VACANT  
County Administrative Officer

MARGIE WILLIAMS  
Clerk of the Board

P.O. Box 784  
MARIPOSA, CALIFORNIA 95338  
(209) 966-3222  
1-800-736-1252

FAX (209) 966-5147

August 29, 2002

The Honorable Gray Davis  
Governor of California  
State Capitol Building  
Sacramento, CA 95814

**Re: Support AB 1400 (Cogdill)**

Dear Governor Davis:

As sponsors of AB 1400 Mariposa County is writing to you in support of this legislation. Mariposa County in partnership with Yosemite National Park believes we have found a composting technology that will help us meet or exceed the state requirement of 50% diversion from the landfill. This composting technology will be the first of its kind built in California. AB 1400 sought State funding as a stakeholder along with the federal government who has provided funding for this project, however, Mariposa County fully recognizes the financial situation of the State. Still, AB 1400 as amended may offer other avenues for the State to become a stakeholder in this technology.

Mariposa County is a small rural county that is sparsely populated with nearly 3 million visitors a year who make their way to Yosemite National Park. Due to these characteristics our county has had a very difficult time locating and embracing an existing solid waste technology that will allow compliance of AB 939. Enclosed is an analysis that we prepared for AB 1400 and in it you will see how we arrived at the conclusion that this proposed composting technology is the most overall and viable solution to achieve the 50% diversion requirement.

Again, on behalf of the Mariposa County Board of Supervisors I ask for your support and approval of this important bill. If you have any questions please contact Supervisor Bob Pickard or myself at 209-966-3222.

Thank you for your thoughtful consideration in this matter.

Sincerely,

Robert C. Stewart  
Chairman

Enclosure

cc: Senator Charles Poochigian  
Assembly Member Dave Cogdill  
Mariposa County Board of Supervisors  
Dale Wagerman, Wagerman & Assoc.  
Brent Harrington, RCRC

**MARIPOSA COUNTY COMPOSTING FACILITY  
PROJECT**

**PRESENTED BY  
MARIPOSA COUNTY  
IN PARTNERSHIP WITH  
YOSEMITE NATIONAL PARK**

**WASTE MANAGEMENT STRATEGY  
FOR THE YEAR 2000  
AND BEYOND**

**AB-1400 (Cogdill)**

## **Mariposa County**

### **Waste Management Strategy for the Year 2000 and Beyond**

#### **Introduction**

The Integrated Waste Management Act of 1989 (AB-939) placed a significant solid waste mandate on all local jurisdictions. It required that all jurisdictions divert 25% of their waste from the landfill by 1995 and 50% by the year 2000. The purpose of this Legislative proposal is to demonstrate Mariposa County's efforts in developing a waste management strategy to meet AB-939 requirements. In addition, this proposal seeks the State of California in becoming a partner with Mariposa County and Yosemite National Park (YNP) in a collaborative process to secure a Compost Facility as a pilot project.

Over the last several years, Mariposa County in cooperation with YNP has worked collectively to find a viable solution for the mandated diversion of solid waste from the landfill. Currently the County and YNP generate approximately 13,000 tons of mixed solid waste, 600 tons of bio-solids, and 180,000 gallons of septage per year. Due to these waste stream characteristics derived from the contribution of YNP and the overall rural nature of the area, the County and YNP have determined that Composting provides the most economical and environmentally sound method to achieve 50% diversion from the landfill as required by state law.

The Compost Facility at build-out is expected to cost approximately \$5.3 million. The Federal Government has appropriated \$1.7 million to the project for capital expenditures along with an additional \$200,000 in support funds. The County is currently evaluating several funding options of its own. In this proposal we are seeking an appropriation from the State as a partner in this project of \$1.8 million. Confident of this technology working with our waste stream, as a pilot project we believe this technology can benefit other jurisdictions in the State.

In the following pages of this proposal Mariposa County & YNP intend to provide an overview of the process that has been undertaken and its accomplishments to date.

## Goals

The County and YNP in cooperation with the California Integrated Waste Management Board (CIWMB) is attempting to procure a composting facility that will accomplish the following goals:

- Provide compliance with the 50% State Mandate for solid waste diversion;
- Provide cost-effective integrated solid waste management;
- Enhance environmental quality, health, and safety of solid waste management throughout the County and in Yosemite National Park;
- Improve environmental technology in California.

The proposed Compost Facility will allow Mariposa County to meet these goals and provide extended life of the Mariposa County Landfill. In addition, there are numerous environmental issues pertaining to the landfill and compliance can be greatly achieved for meeting these and other issues such as the new Waste Discharge Requirements issued by the California Regional Water Quality Control Board.

## Development Process

The procurement and selection process involved several steps. The first step was to mail a Request for Qualifications to over 80 potential bidders. Eighteen responses were received from prospective bidders in October of 1996. Those responses were reviewed and ranked according to the following criteria:

- Experience in design, permitting, construction, and operation of commercial mixed waste composting;
- Success of previous mixed solid waste projects of a similar nature;
- Financial strength;
- Technological capability.

Six firms ranked high enough to receive a Request for Proposal. The proposals were received from the companies and ranked according to experience, facility plan, odor control capabilities, marketing plan, financial plan, cost, and overall responsiveness. Two firms were finalists in the process; these were Bedminster and Herhof-Umwelttechnik. The County and YNP made visits to representative facilities in early 1998. These visits provided the County and YNP a first-hand look at the operations of the facilities.

Ultimately, Herhof-Umwelttechnik was selected after a rigorous selection process.

## **General Guidelines for the Compost Facility**

After several site visits to the East Coast, Canada and in California the County and YNP established several criteria for the best type of system for Mariposa County.

- **Keep it Simple** - The system should have as few moving mechanical parts as possible in order to avoid breakdown and heavy maintenance costs and down-time.
- **Flexibility** – The system should be designed in such a way that it can handle the current waste management conditions and mandates and have the ability to adjust to future changes as they occur.
- **Process Indoors** – The facility must be designed in such a way that all operations are conducted inside a building to avoid odor problems.
- **Avoid Human Contact** – Potential health and safety risks should be avoided by preventing workers from handling waste materials.
- **Sustainability** – In the interest of natural resource conservation and preservation, the solid waste system in Mariposa County, including the waste management operations from Yosemite National Park should incorporate sustainable resource practices. Thus, the facility should improve the community's ability to develop sound land use practices and businesses that both conserve ecosystems and enhance the local economy.
- **Showcase Facility** – From the inception the County and YNP has sought to create a solid waste system that will be an important and unique project demonstrating a partnership for local, state and federal levels of government.
- **Coordination and Flow Control** – The County and YNP must work closely to ensure maximum coordination and waste flow control.
- **Education Program**- There will be a strong and effective education program not only throughout the County and Yosemite National Park, but at the Compost Facility as well.



## **Environmental Benefits**

In light of the current energy crisis effecting California, the State should give consideration to a product of this composting technology as a potential resource. Composting mixed solid waste produces a dry, stable, and inert material. This material along with being safer for placement in a landfill also has high BTU value for co-generation of electricity. In *attachment 1* please find an analysis of the potential energy value of composted mixed solid waste.

## **Composting Mixed Solid Waste**

Composting solid waste is not a new technology. Throughout the world varying degrees of composting operations exist. However, through the investigating of this technology we found that most facilities were composting organic waste. Composting organic waste is accomplished by placing the material in a system where it is degraded biologically to humus with a total nitrogen, phosphorous, and potassium content of 1 to 3 percent, depending on the material being composted. The County and YNP are proposing to secure a Compost Facility that will decompose mixed solid waste (MSW). We have found only a few systems outside of Europe where facilities were fully processing MSW. For this reason the County and YNP have been cautious with respect to a company claims of their systems ability to process MSW. After a rigorous selection process we are confident that we found a manufacture that can build a facility for our waste stream.

## **Project and Process Description**

The key to this technology in biological waste treatment is a vessel composting system. This system is used in conjunction with different technologies selected in order to meet the requirements defined by the European and German standards for the protection of the environment and public health. These requirements are much more stringent than in California.

In a two step process the compost facility will treat 13,000 tons of MSW per year. The MSW will be placed in a closed vessel system for up to 7 days to complete degradation of waste. The specific benefit of the closed vessel composting system is the unique speed of the composting process, which allows the smallest possible area demand for the biological part of the treatment. Environmental impacts like sewage waters, smell, noise, and dust as well as health risks for the

employees are reduced to a minimum due to the closed vessel system. The second step is the final curing of the compost, which is done on windrows. In a covered open building the compost is shifted to allow complete drying of material.

A separation of the compostable and non-compostable fractions guarantees the most economical use of the capacity of the composting system. This process allows for removing ferrous materials, foils, glass, plastics, and other metals for their recycling value. The residues left after screening of the compost are cleaned from these recyclable materials and can be used as a daily cover material or in the future can be used as a biomass for co-generation.

Introduction to California of an economical and environmentally sound technology for solid waste is a key goal of the County and the NPS. Herhof-umwelttechnik has proven its technology reliability and environmental benefits, in large-scale operations in more than 45 facilities worldwide.

## **Conclusions**

Mariposa County has been very aggressive in researching its options for meeting AB-939 mandates. The County, in cooperation with YNP and working closely with CIWMB, has spent a great deal of time and resources trying to determine what integrated waste management strategy will work best in Mariposa County. In this process, the County and YNP's level of knowledge has grown significantly regarding what it takes to build an effective solid waste system. As a pilot project this Compost Facility can be a model for other facilities developed to process MSW. As was mentioned earlier in this document, the Compost Facility is expected to cost approximately \$5.3 million to construct. The Federal Government has already appropriated \$1.7 million for the project. The Federal Government allocation amount was based on the ratio of the waste stream generated within Yosemite National Park. Through this legislative proposal Mariposa County and Yosemite National Park hope the State will be encouraged to join in as a partner to showcase this technology as a model for multi-jurisdictional solid waste management.

## Attachment I

### Energy Value of Composted Material

This is a worksheet showing how to calculate how much waste can be turned into electricity.

The Mariposa County Landfill receives approximately 13,000 tons per year and 5,859 of these tons are diverted to the composting facility. 35% of this material is left when all materials greater than 4 inches is removed. This leaves 2,051 tons per year to be diverted to the compost facility. 40% of the compost stock decomposes to CO2 and water, while leaving 1,230 tons per year of compost stock that can now be used for a biomass product in a co-generation facility.

#### Assumptions;

- There are 2000 pounds per ton.
- Mariposa landfill estimates 2,460,000 pounds of biomass materials per year.
- We estimate that each pound of compost stock will yield 4800 BTU's.
- There are .0002928 kWh per BTU.
- Some energy (approximately 25%) is lost as heat to the atmosphere.
- We estimate that an average home uses approximately 1500 kWh per year.

2,460,000 pounds X 4800 BTU's per pound = 11,808,000,000 BTU's per year

11,808,000,000 BTU's per yr. X .000293 kWh per BTU = 3,459,744 kWh per yr.

3,459,744 kWh per yr. X 75% after heat loss divided by 1500 kWh per residence=

**1,730 residences can be powered with electricity from one year's worth of composted material from the Mariposa County landfill.**

## County and State Statistics

1. The average tipping fee paid in California compared to the tipping fee currently paid by Mariposa County residents.

*The average tipping fee paid in California is \$39.75 per ton.  
The tipping fee paid in Mariposa County is \$65.00 per ton.*

2. The average household income in California compared to the average household income in Mariposa County.

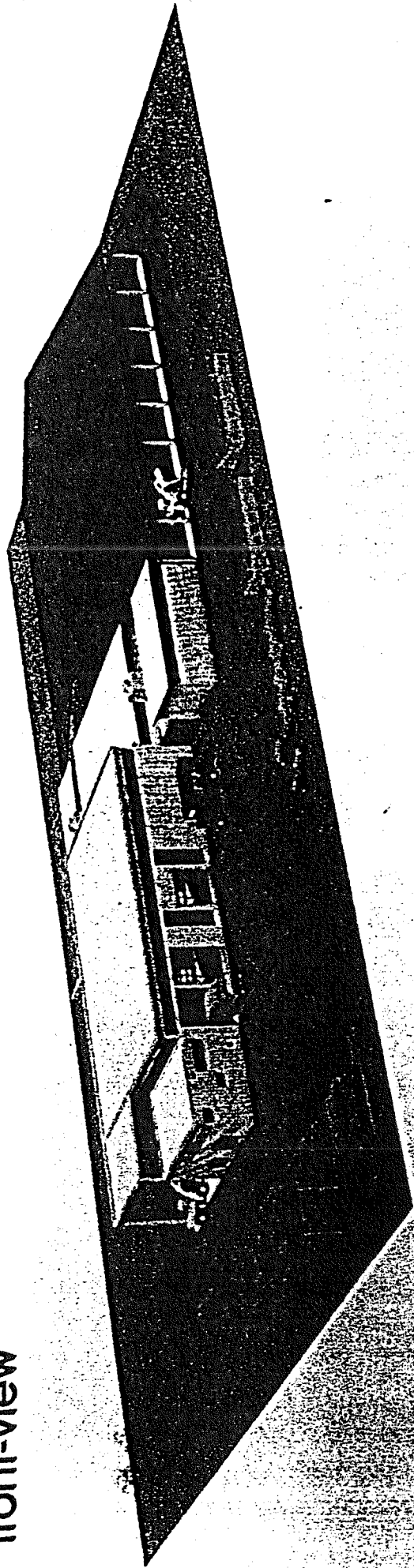
*Mariposa County's per capita income is \$19,415 compared to the State average of \$26,759. Source of information is from California State Department of Finance personal income data of 1997.*

3. The life of the current landfill if the composting project is implemented versus life of landfill if it is not. *Without adding any lined cells to the Mariposa County Landfill and continuing to dispose of waste without composting, the expected remaining life is approximately 12 years. With the compost project, life of the landfill can be expanded by another 20 to 25 years.*

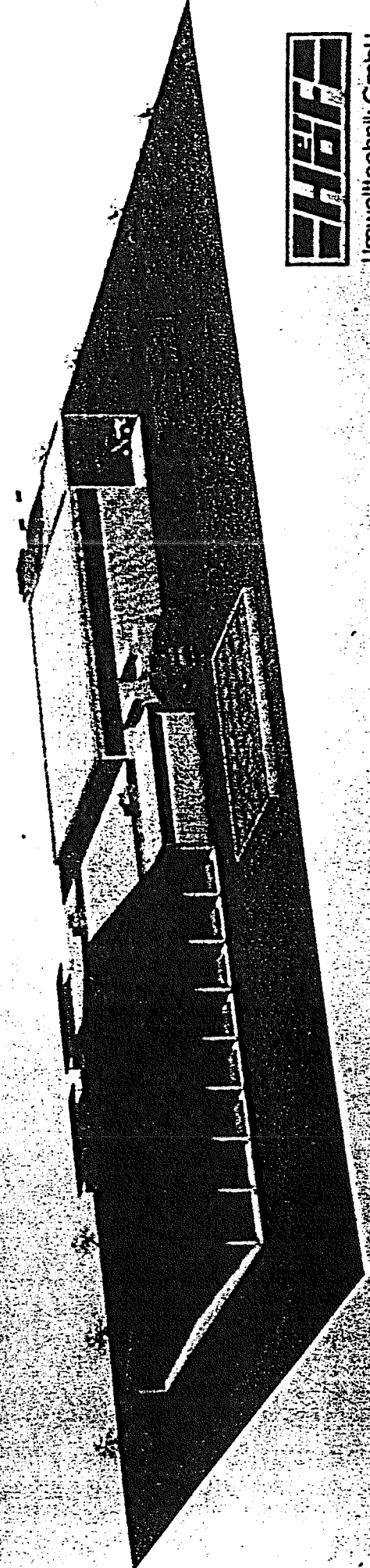
4. Cost to otherwise comply with AB 939 (50% waste diversion requirement) if the compost project is not implemented. *The estimate for capital expenditures as shown in the Source Reduction and Recycling Element (SRRE) is approximately \$2,300,000 with an annual operating cost of \$235,000. The SRRE was prepared in 1993 with a maximum diversion rate of 54%. The principal source of that reduction came from the construction and operation of a Materials Recovery Facility (MRF).*

Treatment plant for municipal solid waste  
**Mariposa California, USA**

front-view



back-view



Umwelttechnik GmbH