

Material Recovery Facility (MRF) Status Report

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Board of Supervisors Meeting

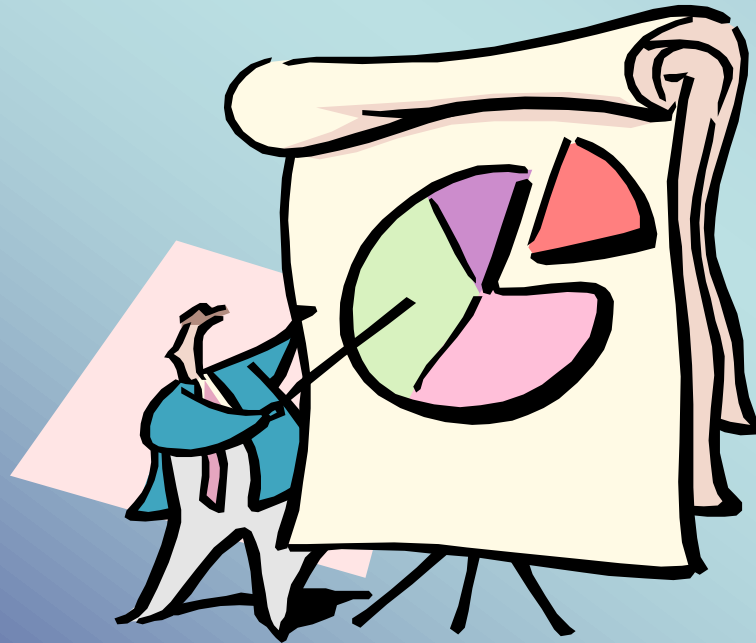
August 18, 2008

- The El Dorado County Board of Supervisors directed staff to complete the following regarding a new MRF on the West Slope:
 - Initiate conceptual planning related to the design requirements
 - Initiate alternative site locations
 - Present alternatives regarding possible County and/or public ownership



The Process

- Based on information currently available, a high-level information gathering and analysis has been completed
- Based on the preliminary analysis, further research will be needed based on the direction received from the Board



Conceptual Plan for the Requirements and Designs of a New Material Recovery Facility

- Curbside single stream recycling programs were developed after the passage of AB939
- As communities work towards curbside single stream recycling, processing technologies have improved significantly and industry has moved towards Clean MRFs
- The majority of the West Slope's collection programs include single stream curbside recycling
- The conceptual design must be consistent with the enhanced recycling programs



Conceptual Design of the MRF

- At a minimum, the new facility should contain the following:
 - State-of-the-art Materials Recovery Facility for processing single stream source separated materials and mixed waste (210 tpd)
 - Full-scale transfer station to service public self-haul and commercial haulers (790 tpd)
 - A vibrant and dynamic source separation system that is continuously evolving to embrace and accommodate the flexibility, adaptability, and expansion of new products and address challenges in the future
 - Fully enclosed building to mitigate noise, odor, and vector issues, and with a public education center
 - Must be designed to accommodate peak self-haul traffic with 12-15 indoor unloading lanes and incorporate newer technologies to recover recyclable materials from self-haul

Conceptual Design of the MRF

Cont...

- Full scale C&D processing operation (70 tpd)
 - Full scale Green Waste processing operation (130 tpd)
 - Space for future alternative technology
 - Household Hazardous Waste (HHW), material re-use, and e-waste drop-off location
 - Source separated recycling Buy-Back Center
 - Site must be centrally located and at least 15 usable acres to accommodate all of the features described above and designed to meet the needs of the County for at least the next 20 years
- It is estimated that the cost range for a new modernized MRF is approximately \$22 million to \$39 million (includes 91,000 -136,000 sq ft fully enclosed structure). This includes MRF, C&D, and Green Waste equipment costs that range from \$4 million to \$8 million

The Existing MRF

- MRF History
 - Former factory building that was remodeled into a “dirty MRF” in 1994
 - Projected tonnage for 1995 was 77,272 tons annually
 - Permitted to receive municipal solid waste (MSW), recyclables, green waste, construction and demolition (C&D) materials, and household hazardous waste
- Current MRF
 - County population has grown significantly and the solid waste collection programs are shifting towards single stream curbside recycling
 - Currently 126,500 tons annually
 - Lacks the ability to sort recyclables from single stream collection
 - Lacks the ability to efficiently sort materials from self-haulers
 - Current sort line is undersized and at the end of its operational life
 - Without significant capital investments, the current MRF cannot meet future landfill requirements, and may still be deficient based on location, size and geology of the site

The Existing MRF Cont...

- Cost to modernize the existing MRF is approximately \$17 million
- Based upon the current:
 - Site conditions
 - Site constraints
 - Site size of only ten acres
 - Inability to meet future diversion requirements
 - Inability to handle future growth
 - Substantial investment required to modernize the existing facility

The investment may still not provide the County with a facility that will meet future solid waste and recycling demands, future diversion requirements, or growth of the County due to the limited size of the site

Alternative Technologies

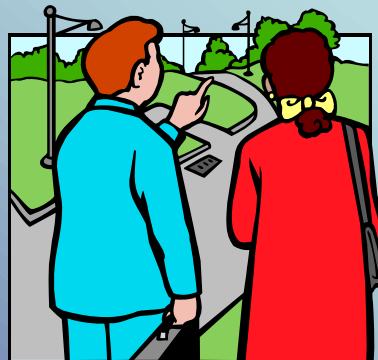
- Due to increasing regulatory solid waste land filling restrictions and the current energy situation, research and development of alternative waste sorting and waste conversion technologies is rapidly progressing
- An economically viable, state of the art waste facility incorporating both MRF and Waste to Energy (WTE) alternative technologies would produce the highest benefit to El Dorado County residents and the environment
 - A new MRF design should include energy and labor efficient waste sorting technologies
 - In addition, sites selected must be sized to accommodate alternative technology

Alternative Technologies Cont.

- Capital and Operating Costs
 - Initial capital costs associated with processing 300 tons of residual waste per day can range from \$50 million to \$100 million depending upon the technology
 - Operating costs vary between \$15-\$100/ton depending on the technology used
 - The current cost for landfill disposal in El Dorado County is approximately \$15-\$22/ton
- Based on the preliminary analysis, the Environmental Management recommends further research to assess the economic feasibility and potential alternative technology application as an alternative to land filling residual post MRF MSW

Alternative Considerations for the Location of a New Redesigned and Reconstructed MRF

- The goal of this task was to search and identify locations for a new MRF on the Western Slope
- The analysis was conducted in a quantitative two-step process. The first step was to identify fatal flaws and eliminate parcels, which did not meet the requirements of a potential MRF site



First Step

- The following list identifies the set of criteria used in this analysis:
 - Centrally Located
 - Vacant and Industrial
 - Industrial Use/Zoning
 - Site greater than 15 acres
 - Away from Rivers and Creeks
 - 200 Feet Away from a Holocene Fault
 - Five Miles within US Highway 50
 - Outside of Known Historic or Cultural Sites
 - Slope Must Be Less Than 20%

Second Step

- The results of the primary site selection analysis yielded 20 parcels that comprise a total of 6 potential sites for a new MRF on the West Slope.
- These sites were then evaluated based upon a set of secondary criteria including:
 - land use compatibility
 - development concerns
 - transportation impacts
 - site economic criteria
 - impacts to biological resources
- The potential sites are located in:
 - Cameron Park 1
 - Cameron Park 2
 - Camino/Apple Hill
 - Greater Placerville
 - Latrobe
 - South Shingle

Board and Community Interest Regarding the Existing MRF Location and Union Mine Landfill

- Existing MRF
 - Did not meet the primary selection criteria because it is not at least 15 acres
 - There are significant costs associated with remediating and stabilizing site soils, demolishing the existing facility, and the construction a new upgraded facility at the existing location that may still not meet the future needs of the County
 - The intensity of this reconstruction would negatively impact the existing refuse recovery and transfer operations
 - short-term construction impacts would include dust, construction traffic, and increased noise

Board and Community Interest Regarding the Existing MRF Location and Union Mine Landfill Cont.

- Union Mine Landfill
 - Did not meet the primary selection criteria
 - Not centrally located
 - Topography at the site does not lend itself to 15 acres of generally level usable land
 - The site has significant slopes greater than 20%.
 - The site is more removed from Highway 50 than some of the other alternatives
 - Development of this site would also require methane protection and differential slope mitigation measures typically associated with building on or near a landfill

Alternatives regarding possible County and/or Public Ownership of the MRF

- Three options were considered for the ownership and operation for the proposed new MRF.
 - Option 1: MRF to be fully-owned and operated by El Dorado County
 - Option 2: MRF to be wholly privately-owned and operated by a private company
 - Option 3: A hybrid of the first two options, with the County to own the MRF and contract out the operations to a private company

Option 1 – Publicly Owned and Operated MRF

- Advantages:
 - Control over decisions including design, operation, costs, tipping fees, and expansion
 - Control over waste stream, diversion program and recycling revenue
 - County ownership of the Solid Waste Facilities Permit
- Disadvantages:
 - County required to provide all capital funding
 - County responsible for contracting and hiring consultants and others to assist in appropriate design and construction of the MRF
 - County responsible to hire staff to operate the facility
 - County to handle the task of marketing recyclables
 - The County responsible for ongoing capital improvement costs as the facility ages
 - The County responsible for closure costs

Option 2 – Privately Owned and Operated MRF

- Advantages:
 - The private company would provide the capital and expertise necessary operations
 - The marketing of products could be handled by a private firm that operates more than one MRF facility
 - Private company assumes risks associated with market fluctuations for the sale of recyclable commodities
 - Private company responsible for closure costs
 - County could negotiate a new franchise agreement extension in conjunction with the County's first option to purchase the facility from the franchisee, either when the franchise agreement terminates, or the Contractor sells the business
- Disadvantages:
 - Less direct control by the County regarding decisions specific to the operation of the MRF
 - Possibly no revenues from recycled materials, unless provided for in the franchise agreement
 - No control as to where materials are transferred unless stipulated in the franchise agreement
 - County may not want the first option to purchase the facility due to age of equipment, and potential site cleanup liabilities

Option 3 – Publically Owned and Privately Operated MRF

- Advantages:
 - County could have control over building design, equipment, and features
 - Private company would provide the expertise necessary to efficiently operate the MRF
 - Marketing of recyclable materials handled by a private firm that operates more than one MRF facility
 - County could control where materials are disposed
 - County may receive a share of recycling revenue
 - County ownership of the Solid Waste Facilities Permit
 - County would have the option to take over MRF operations at the end of a contract term with the private company
- Disadvantages:
 - Less direct control by the County over decisions regarding operations of the MRF
 - Cost of contracting with a private company and sharing profits
 - County to provide all capital funding for construction and ongoing improvements of a new MRF
 - Public works contracting requirements

Recommendations

- Does the Board want staff to negotiate the, “Conceptual Plan for the Requirements and Designs of a New Material Recovery Facility” should an application for a new MRF be submitted to the County?
- Does the Board want staff to continue pursuing a publicly owned and privately operated MRF?





Questions

