



Memorandum

MONTEREY REGIONAL WASTE MANAGEMENT DISTRICT

Reviewed by: [Signature]
General Manager

Date: 7/12/19

DATE: July 12, 2019
TO: General Manager
FROM: Equipment Maintenance Manager
SUBJECT: Purchase of One Used 3 Axle Semi-Truck

RECOMMENDATION: That the Board authorize the General Manager to purchase one (1) used 3 axle semi-truck (tractor) in an amount not to exceed \$80,000. Funds in the amount of \$80,000 for this purchase are included in the Capital Outlay portion of the Fiscal Year (FY) 2019/20 Budget.

BACKGROUND

Currently the Materials Recovery Facility (MRF) processes two types of materials, curbside recyclables and construction and demolition material. Each of these waste streams has a fraction that is non-recoverable or is not recyclable, most commonly referred to as residual or residue. Residual materials generated from the single stream (SS) and construction and demolition (C&D) lines are carried by the same conveyor, discharged into live floor trailers and disposed of at the landfill face.

At the residual discharge area there are two chutes that this residue conveyor can discharge into. Each of the two loading lanes must have a trailer under the discharge chute that can receive material so when one trailer fills to capacity, material can immediately begin to discharge into a second trailer to prevent shut down of the sorting lines. Once these vehicles load to capacity, they must make a timely round trip to the landfill face and back to the MRF residual discharge area in order to keep the sorting lines in production. Sort line residual volume requires operators to have two vehicle combinations (tractor and trailer) under the discharge area and one vehicle combination in transit to the landfill during production times. Trailers routinely fill at a rate of 35 to 40 minutes. The average round trip to the landfill is about 30 minutes. By only having 3 tractors, unpredictable interruptions at the disposal location or mechanical issues with a tractor or trailer can delay this required turnaround time and cause the sort lines to shut down.

DISCUSSION

Currently, there are three tractors and five trailers available for this purpose. An additional 3-axle tractor would benefit the operation in the following ways:

- Allow flexibility in service and repair schedules for these vehicle types.
- Allow timely placement of trailers under discharge area as loads are hauled away.
- Allow additional vehicle combinations to remained hooked up and ready to be put into service when needed to prevent lost production time.
- Allow use of an additional tractor trailer combination for other MRF transfer needs.
- Provide back-up equipment for any significant down time or repairs.
- Provide equipment availability for training purposes.

Overall, a fourth semi-truck would provide operations with the ability to have tractor trailer availability and not adversely affect the production time of the sort lines.

Staff intends to purchase a used tractor that is powered by compressed natural gas (CNG) if one can be found that is equipped to meet the requirements needed for this application. In April of 2018 when staff purchased Unit MR54 a "new diesel" diesel powered 2014 International tractor, efforts to find a suitable CNG tractor within a reasonable time frame were unsuccessful. The search for a CNG powered tractor will again be pursued, however, the result may lead to consideration of purchasing another "new diesel" diesel-powered unit should locating a CNG unit prove to be as difficult as it was with the 2018 purchase. The purchase of a 2011 or newer diesel-powered tractor that has the diesel emission fluid (DEF) technology will meet the more stringent requirements of the pending Diesel Truck Regulations effective January 1, 2023.

As it relates to emissions, when compared to CNG, there is little difference in harmful emissions levels between the two fuels. In a 2012 transit bus study performed by MJB&A of Manchester, NH "Clean Diesel versus CNG Buses; Cost, Air Quality, & Climate Impacts" the following statement was given regarding emissions of the compared fuel types: *"Replacing 10 older diesel buses with new diesel buses will reduce annual tail pipe nitrogen oxide (NOx), particulate matter (PM) and hydrocarbon (HC) emissions by 4,953 kg, 275 kg and 421 kg respectively. Replacing 10 older diesel buses with new CNG buses will reduce annual NOx, PM and HC emissions 4,197 kg, 279 kg and 471 kg respectively. On a per-bus basis new CNG buses provided slightly greater PM and HC reduction, but lower NOx reductions, than new diesel buses".*

FINANCIAL IMPACT

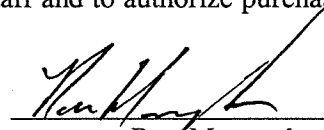
Funds totaling \$80,000 are included in the FY 2019/20 Capital Outlay Budget.

STRATEGIC PLAN

The purchase of this additional semi-truck is instrumental in the MRF diversion and resource recovery programs.

CONCLUSION

Purchasing used equipment requires a timely response from the buyer, it is therefore recommended that the Board authorize the General Manager to approve selection made by staff and to authorize purchase, for one (1) used three axle semi-trucks in an amount not to exceed \$80,000.



Ron Mooneyham