

ITEM #: 23
DATE: 09-26-23
DEPT: FLEET

COUNCIL ACTION FORM

**SUBJECT: FLEET REPLACEMENT PROGRAM – RESOURCE RECOVERY
WHEEL LOADER**

BACKGROUND:

The City’s Resource Recovery Plant (RRP) uses two mid-size wheel loaders to move thousands of tons of refuse received at the plant each year. Due to the high use of these machines a rotation plan was developed to have one primary and one secondary machine.

The machines currently in use are diesel-electric hybrid (DEH) wheel loaders. The DEH loaders have several advantages over conventional machines, including longer operational life, 26% lower fuel consumption (nearly 10,000 gallons over eight years), lower carbon footprint, and improved performance.

Although the purchase cost of a DEH machine is greater than the conventional machine, the longer operational life allows the equipment to serve for four years as the primary loader, then move into a backup role for the next four years. This eight-year lifecycle allows the increased purchase price to be spread out over a longer period compared with conventional loaders, which must be taken out of service sooner. **Therefore, the per-year cost of the DEH loader is far less than a conventional loader.**

An additional, unexpected benefit to the DEH loader is reduced tire wear. The sharp and abrasive materials received at the RRP necessitate solid rubber tires for these loaders. Each set of four tires costs \$40,000. The DEH loader’s improved traction control and electric drive reduces tire wear by 50%, for an annual savings of approximately \$10,000 per loader.

The RRP’s current secondary loader is a 2015 John Deere 644k DEH. This loader is now due to be removed from service, allowing the current primary loader to move into the secondary role, and purchasing a new machine to serve as the primary equipment for the next four years.

Bids were solicited for one new DEH wheel loader with bucket, extended warranty options, options for attachments, and a trade-in offer for RRP’s existing secondary loader. On September 5, 2023, bids were received as follows:

Bidder	Unit Price	Make	Model	Year	Trade-in Offer	Total Less Trade-in Value
Murphy Tractor & Equipment	\$369,827	John Deere	644X Hybrid	2024	(\$40,000)	\$329,827
RTL Equipment of Des Moines	\$279,000	Doosan	Conventional	2024	(\$10,000)	\$269,000

The bid from RTL Equipment of Des Moines is for a conventional loader, which does not meet the minimum specifications required by the bid documents. Staff reviewed the bid from Murphy Tractor & Equipment, Des Moines, IA, and determined it is acceptable. In addition, staff proposes purchasing an optional forklift frame from Murphy Tractor & Equipment, which was offered with the bid at an additional cost of \$11,754.

Murphy Tractor and Equipment proposed three alternative warranty options:

- A) Comprehensive warranty plus powertrain and hydraulic system coverage,
- B) Powertrain and hydraulic coverage only (no coverage of other systems), or
- C) Comprehensive warranty only (no powertrain or hydraulic coverage).

The pricing for the potential warranty combinations from Murphy is outlined below:

Warranty Option	Comprehensive	Power Train & Hyd.	Total
A	6,000 hrs. / 48 months	10,000 hrs. / 72 months	\$35,523
B	No coverage	10,000 hrs. / 72 months	\$30,436
C	6,000 hrs. / 48 months	No coverage	\$18,276

Staff believes Warranty Option A, at the cost of \$35,523, is the most advantageous to the City. The total cost for this purchase is therefore \$377,104, as outlined in the table below:

Item	Cost
2024 John Deere 644X Hybrid wheel loader with bucket	\$ 369,827
Trade-in Offer for 2015 John Deere 644k loader	(40,000)
Option #2 forklift frame	11,754
Extended Warranty Option A	35,523
TOTAL	\$ 377,104

The available replacement funds as of the delivery date of May 2024 will be \$380,869.

ALTERNATIVES:

1. Award a contract to Murphy Tractor and Equipment of Des Moines, Iowa, in the net amount of \$377,104 for one 2024 John Deere 644X Hybrid wheel loader which includes the Extended Warranty A, Option #2 Fork Frame, and the trade-in offer of \$40,000 for the City's 2015 John Deere 644k DEH Loader.
2. Reject the bids.

CITY MANAGER'S RECOMMENDED ACTION:

Fleet Services and Public Works staff agree the John Deere 644X Hybrid from Murphy Tractor and Equipment, of Des Moines, Iowa meets the City's needs as specified, at the lowest price. Purchasing this loader will provide the best and most economical equipment. Therefore, it is the recommendation of the City Manager that the City Council adopts Alternative No.1, as described above.