

**CITY OF SIOUX FALLS**

## Fleet Life Cycle Cost Analysis

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### Where we started!

- Fleet was originally established by the City of Sioux Falls as a division of Public Works.
  - Goal was to provide a safe, cost-effective and productive fleet of equipment and vehicles to support operations.
- Majority of vehicles were placed on a replacement plan of 10 years and/or 100,000 miles. Not based on any key indicators.
- Lease/rental rates were collected to recoup the original purchase price of equipment, not expected replacement.
- In 2015, the City of Sioux Falls hired a national consulting firm to review our Fleet Operations.

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### What we learned.

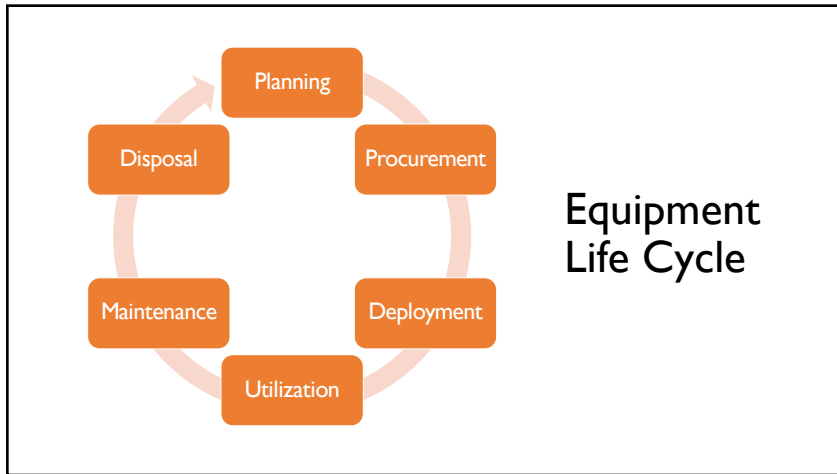
- Improve Organizational Structure
  - Fleet Manager and 2<sup>nd</sup> Equipment Repair Supervisor were added.
- Procure Fleet Management Information System
  - Leverage new software to collect accurate data and establish Key Performance Indicators to be used to establish effective replacement plans.
- Consolidate and Centralize Fleet Operations
  - Everyone is using the same software to track expenses in the same way.
- Leverage software to improve Parts and Inventory
  - Organize and centralize inventories and improve controls.
- Right-size Fleet
  - Utilization of every piece of equipment.
  - This requires Life-cycle management based on true and accurate data!

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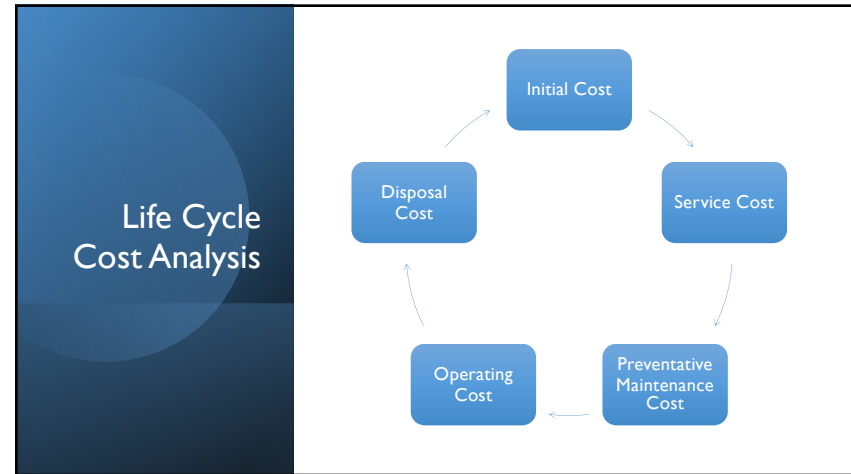
### Where we are today!

- Fleet Management is centralized with five separate shop locations.
  - Police
  - Fire
  - Parks
  - Sanitary Landfill
  - Fleet/Street
- Implemented a modern Fleet Management Information System.
  - Standardized repair, maintenance, and reporting activities.
- All vehicle/equipment replacement plans are reviewed annually.
  - Finance, Fleet, and Division specific personnel are included in process.

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### Life Cycle Cost Analysis

- Establish Life-Cycle Categories to compare similar equipment
- Total capital value should include the purchase price, plus the cost of upfitting the asset prior to placing into service.
- Maintenance costs should be broken down as much as possible
  - Preventative maintenance
  - Breakdowns, warranty claims, and recalls – Track when they occur in life of vehicle
  - Non-target costs
    - Physical damage caused by normal operations – included.
    - Damage caused by operator misuse or accident – don't include.
  - Downtime
  - Operating Costs

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### City of Sioux Falls Planning Process

- Annual meetings are held to review every piece of equipment in the replacement plan with each separate Division.
  - Finance, Division Personnel, and Fleet team members are involved.
  - Full life cycle costs are reviewed to determine replacement.
    - Can the equipment last another year?
    - Does it need to be replaced sooner in the plan?
    - Based on similar equipment type, do we expect additional unplanned maintenance in the near future?
  - If it is determined equipment does need to be replaced:
    - Bid specifications are reviewed and updated as needed.
    - Procurement options are evaluated.

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## Procurement

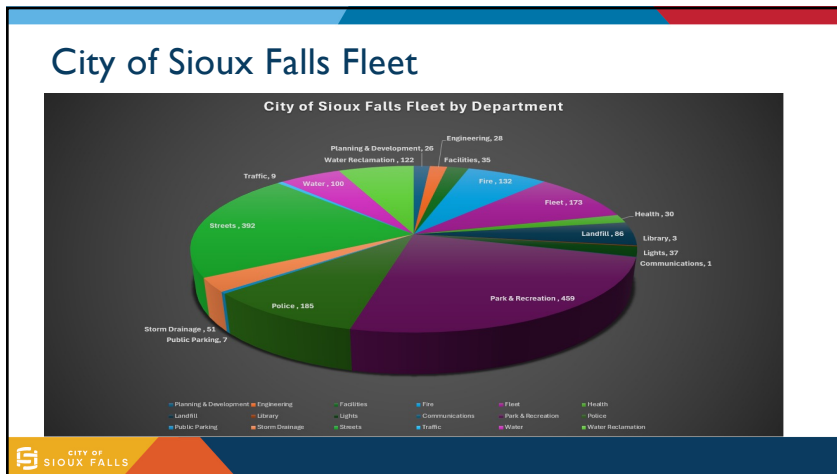
- Bid Specifications
  - Write quality into your specifications, do your homework!
  - Extended Warranties
  - Maintenance Programs
  - Life extension Programs
  - Buybacks
- Cooperative Contracts
  - Not all Cooperative Contracts are created equal
    - Ceiling based price contract – Allows negotiation
    - Fixed price contracts
  - Benefits
    - Standardization of models
    - Parts inventory is reduced
    - Relationships are developed
    - Able to design build equipment (firetrucks, snowplow trucks, etc.)
    - Saves time
    - Transparent
  - Drawbacks
    - May not be the lowest cost, dealers may not want to negotiate from ceiling base price.
- Closed end lease vs. Purchase
  - Perform a cost benefit analysis to find the best solution

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## Disposal of Assets

- The City of Sioux Falls has turned to an online auction site for disposal of assets.
  - Increased number of bidders across and outside US.
  - Auction site comes to site and takes pictures/videos of auction items.
  - Buyers pay premium on bids to auction site.
  - City is responsible to coordinate pickup once payment has been received.
  - Increased returns with much less work.

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### City of Sioux Falls Fleet 25-29 OCEP Plan

	2025	2026	2027	2028	2029
Large Equipment - Streets	\$ 1,785,000	\$ 2,970,000	\$ 2,700,000	\$ 2,350,000	\$ 825,000
Large Equipment - Water	\$ -	\$ -	\$ -	\$ 360,000	\$ 150,000
Large Equipment - Water Reclamation	\$ 500,000	\$ 975,000	\$ 250,000	\$ 345,000	\$ 750,000
Large Equipment - Landfill	\$ 660,000	\$ 3,975,000	\$ 4,810,000	\$ 2,500,000	\$ 2,960,000
Large Equipment - Lights	\$ 400,000	\$ 520,000	\$ 225,000	\$ -	\$ -
Large Equipment - Storm Drainage	\$ 775,000	\$ 900,000	\$ 1,060,000	\$ 150,000	\$ 100,000
Trucks and Pickups	\$ 495,000	\$ 2,985,000	\$ 1,640,000	\$ 515,000	\$ 680,000
Sedans, SUVs and Vans	\$ -	\$ 126,000	\$ -	\$ 120,000	\$ -
Toolcats	\$ -	\$ -	\$ 41,000	\$ 50,000	\$ 87,000
Other Equipment	\$ 72,000	\$ 90,000	\$ -	\$ 20,000	\$ -
Amphibious Vehicle	\$ -	\$ 45,000	\$ -	\$ -	\$ -
<b>Total Fleet Capital Equipment Program</b>	<b>\$ 4,687,000</b>	<b>\$ 12,586,000</b>	<b>\$ 10,726,000</b>	<b>\$ 6,410,000</b>	<b>\$ 5,552,000</b>

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## Life Cycle Cost Analysis

- Utility trucks are purchased and upfitted to reduce injuries and meet specific needs of division.
- Average @ 10,000 miles/year.
- Start in replacement plan @ 10 years and move based on data.



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## Life Cycle Cost Analysis

- Trucks are the backbone of our street maintenance operations.
- Used for salt/sand in winter and asphalt in summer.
- Over 50 units in service.
- Adding units as city grows to maintain level of service.
- Goal is to shorten life cycle, but cost is a challenge.



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## Life Cycle Cost Analysis

- Jetter/Vac trucks are used by Water Reclamation and Storm teams to clean and maintain infrastructure.
- Prices continue to escalate quickly.
- Reviewing purchase options with teams before replacement.



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## Life Cycle Cost Analysis

- Aerial trucks are used in Light and Power and Traffic Maintenance.
- Booms are annually inspected and normally determine life cycles of units.
- Work on traffic signals and streetlights across city.



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### Life Cycle Cost Analysis

- Purchase different sized units and require shared use across city.
- Used in Street Maintenance, Levee and Drainage Pond Maintenance, Sewer and Water Maintenance.
- High costs push longer life cycles.

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### Life Cycle Cost Analysis

- Currently lease 44 motorgraders year round.
- Bid specification was written in 3 separate lots.
- Currently have 34 units on a 3 year lease and 10 units on a 5 year lease.
- First contract expires 11/1/2026.



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### Life Cycle Cost Analysis

- Life Cycle Planning is important from purchase to disposal.
- Standardized data in a centralized system.
- Compare only vehicles in the same group.
- Use data to optimize life cycles.
- There are always exceptions to the rule.
- Economy and available dollars are always a part of decision process.

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