



Equipment Utilization Overview

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Background

- Since 2013, Board has provided resources allowing staff to focus on business and operational efficiencies to increase production with current staff resources
 - Replacing older, high-maintenance equipment with new machines (lease and purchase)
 - Adding new technologies to the equipment portfolio
 - Grinder/Skid-Steer
 - Fecon (2)
 - Redirected staff to focus on priorities
 - Solicited contract services
 - Mowing pilot projects
 - Tree removal



Background

- Implemented tools to assist with tracking work production and equipment usage in order to evaluate operational efficiencies
 - GPS Insight
 - Fuel reporting software
 - Operational metric reports
- Goal is to increase production without added staff
- Adequate justification for future purchase or lease of new equipment

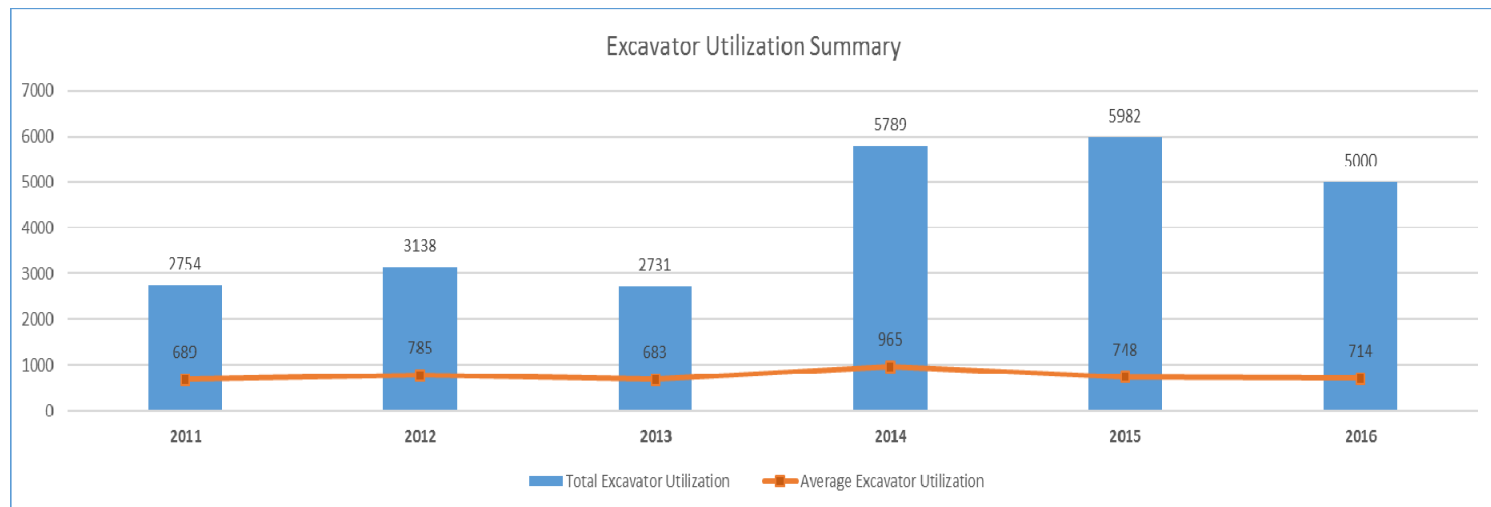


Equipment Usage

- Focus on ‘excavators’ – LWDD workhorses
- Traditionally, retained some machines for back-up/emergency purposes
- Operational challenges that reduce efficiency
 - Geographical issues, start/stops
 - 500 miles of canals over a 200 sq-mi area
 - Requires frequent mobilization / de-mobilization
 - Property disputes
 - Encumbrances

Annual Equipment Usage

- No utilization records prior to 2010
- 4 excavators (2011-2013) – 2,874 hrs/yr Avg
- 8 excavators (2014-2016) – 5,590 hrs/yr Avg
 - Doubled number of machines as well as total annual machine hours since 2013 (work)
 - Approximately 10% increase in annual utilization



Annual Equipment Usage (con't)

- Increased both total equipment hours and utilization without hiring additional employees
 - Limit of work assignments vs. staff qualification
 - Re-allocated current staff to priority functions
 - Shop → Operators
 - Redirected Positions (Vacancies) → Tree Crew



Lease vs. Purchase Considerations

- Maintenance as machinery ages (costs)
- New technology (improved performance)
- Machine type (excavation, grinders, etc.)
 - Additional hours included for emergency purposes
 - Leased machine have utilization limitations (~58%)
 - Over utilization trips increased hourly lease fees (\$50/hr)
- Need for excavators may be reduced in the future
 - Large clearing projects will be completed; may not need after lease or useable life



Efficiency Improvement Considerations

- Employee performance incentives
 - Merit increases based on overall employee performance currently in place
 - Balance consideration
 - Production vs. safety
 - Fairness / equity to operators given external obstacles, delays, etc.
- Overtime / split-shifts
 - Hourly rates increased (including benefits, etc.)
 - Additional support staff may be necessary (supervision, fuel, etc.)
 - Increased salary/benefits budget, training, liability
 - Potential off-hour conflict with adjacent residents
- Contracted services
 - Reduced need for District-owned equipment and staff
- Staff commuting
 - Time accounting - Clock-in / clock-out procedures

Annual Work Hours (excluding overtime)

■ 40hrs /wk x 52 wks => 2080 hrs

- Less paid holidays => -96 hrs
- Sick & annual leave -100 hrs

Max. Utilization: **1,884 hrs → 91%**

■ Additional considerations

- Travel time to/from work sites (~1hr/d) → 208hr
- Routine staff & safety briefing, supplies, etc. (~.5hr/d) → 104hr
- Equipment fueling, greasing, safety check, etc. (~.5hr/d) → 104hr
- Mobilization (2-4 staff, 2-4hrs/mobilization/15 moves/yr) → 135hr
- Routine maintenance (~2d/qtr.) → 80hr
- Break/fix and repairs (~30hr/yr) → 30hr
- Training, administration & staff events (~60hrs/yr) → 60hr

1,884 - ~831 = 1,053 hrs → 51%

■ Current Lease Agreement 1,200 hrs/yr → 58%

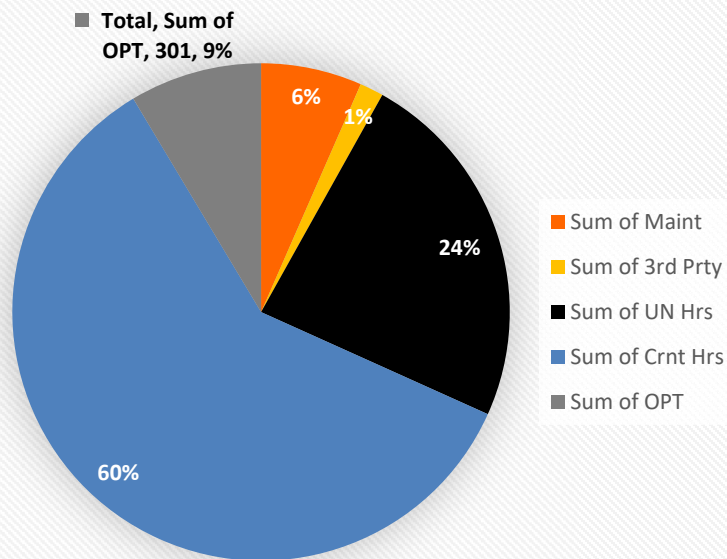


Equipment Utilization Statistics

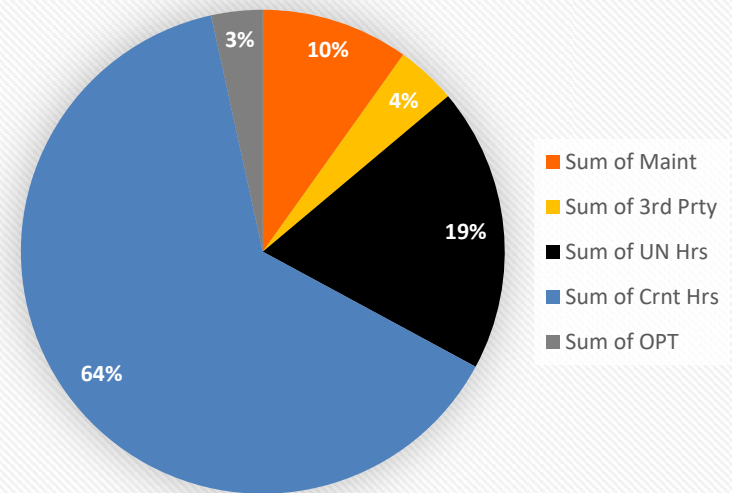
Current Effective Utilization

1st Quarter of 2017 (Jan- Mar)

Total Utilization – Heavy Equipment



Total Utilization - Mowers

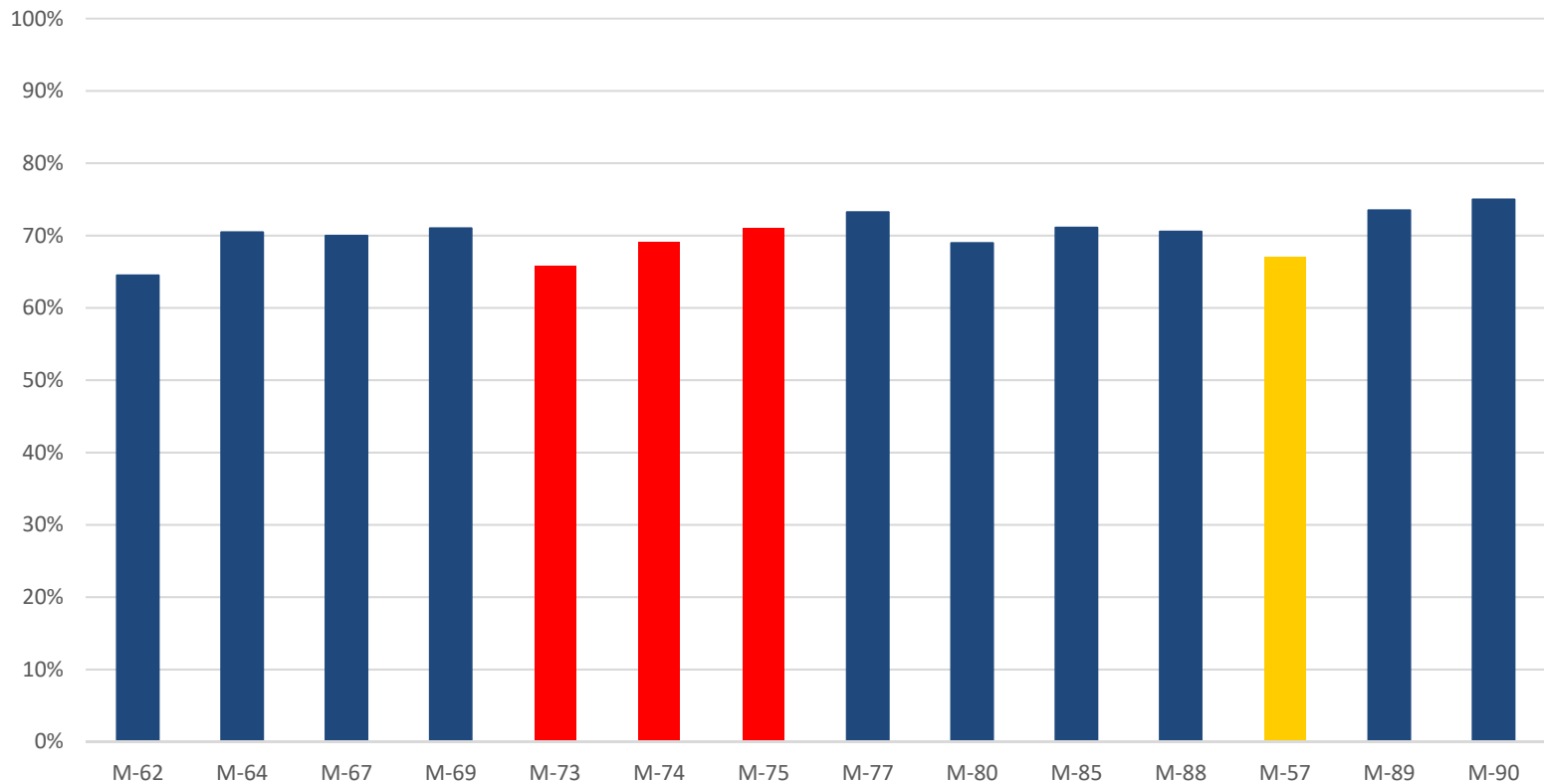


- Crnt Hrs – Percentage of operation hours
- Maint – Percentage of maintenance and shop hours
- 3rd Party – Percentage as a result of warranty work or parts delivery delay
- OPT- Percentage of defined operational duties including, mob/de-mob, scheduled training & other misc. administrative activities
- UN – Percentage of un-defined time including travel time, safety checks, routine greasing, fueling and similar activities

Equipment Utilization (Production Units)

Heavy Equipment Net Utilization

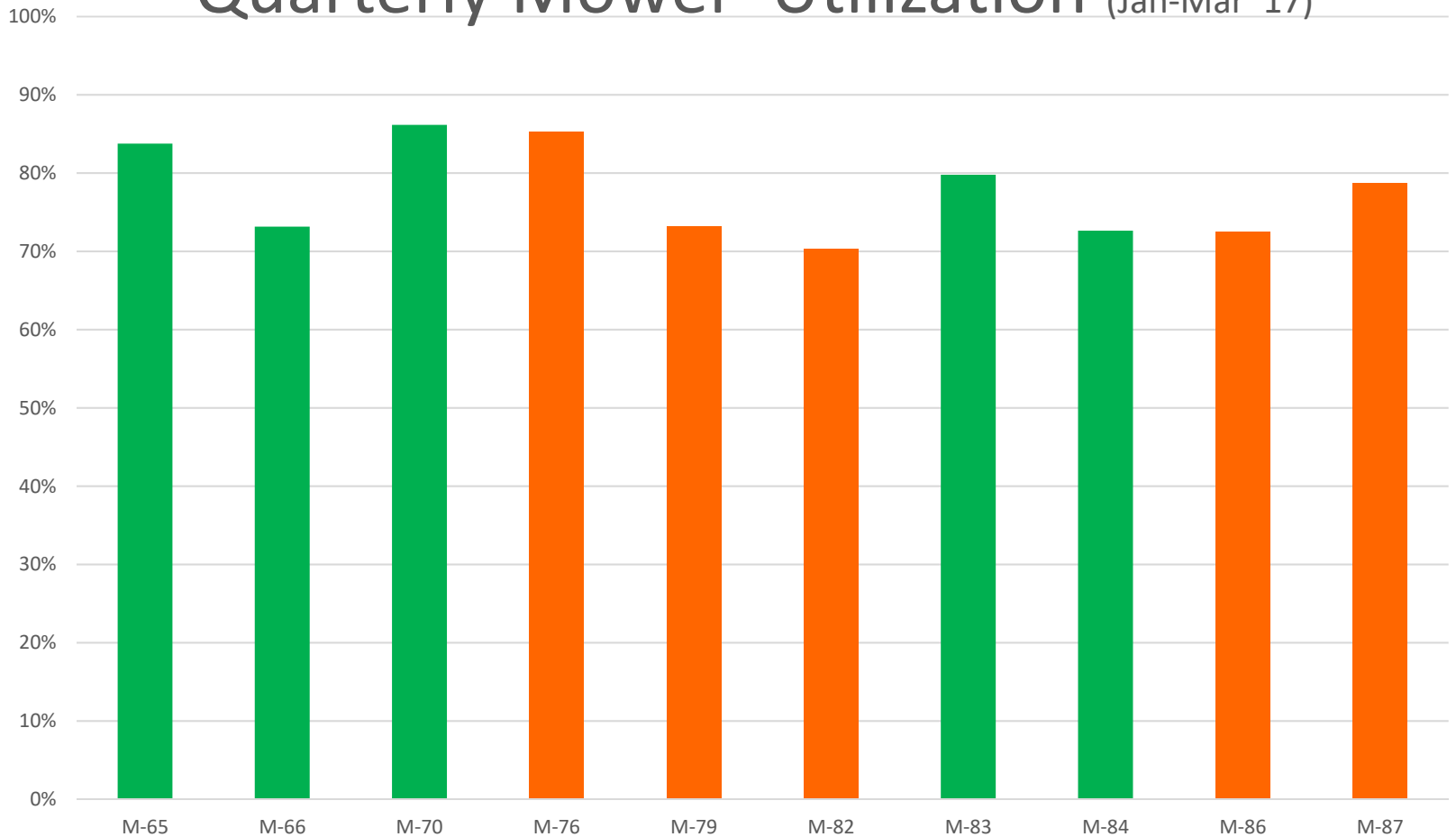
Quarterly Equipment Utilization (Jan-Mar '17)



Equipment Utilization (Production Units)

Mower Net Utilization

Quarterly Mower Utilization (Jan-Mar '17)





Proposed Utilization Improvements



Proposed Utilization Improvements

- **Overtime work** (\$2500-\$5000/mo)
 - Mobilization to the extent possible & practical
 - Reduce downtime of equipment and manpower
 - Ancillary activities (including installation of gates, removal of isolated shoaling or erosion and other non-routine activities)
 - Production equipment stays on key projects
 - Offers opportunity for training additional operators
- **Split-shift** (no additional cost)
 - One (1) Mechanic
 - Performs routine maintenance
 - Provides support for OT teams as may be necessary

Proposed Utilization Improvements

- **Take home vehicles** (\$550/mo for 4 staff)
 - On a trial basis for limited equipment
 - Assign take home vehicles to operators
 - Operators shall report to yard each morning
 - Operators shall continue to fuel equipment
 - Operators shall work until end of shift and go straight home
 - Result in 30 to 45 min additional work (~.75 percentage points)
- **Review option for 3rd Party or after hour fueling**
 - Reduce downtime related to fueling auxiliary tank and associated equipment
 - Facilitate operators going directly to job site
 - Several logistical issues remain, including limitations, costs, monitoring, etc.



Next Steps

- Evaluate improvements
- Quarterly reports to Board
 - Next report July 2017