



# Minidoka County School District #331

*instructional intensity in all classrooms through the use of Idaho Core Standards and by incorporating 21<sup>st</sup> century strategies to improve academic achievement and demonstrate growth for all students."*

## **Lawn Equipment Proposal** February 6, 2017

Dr. Ken Cox, Minidoka District Board Members

The Maintenance Department is seeking to Lease Purchase a new wide area mower to replace two wide area mowers that were purchased used sometime prior to 2002. They are both 1990 model years. During the 2008 budget shortage the wiring harness burned up all the controls on one model. We used that mower for parts to service and keep the other mower running. Now the second is experiencing hydraulic problems as well as a mowing wing that had to be reattached because of damage. There is a lot of down time on this mower causing the crew to try to find ways to put the mower back in service. There is lots of unproductive time and money being used trying to keep this mower in service.

Currently the department mows 122 acres at least once a week and sometimes in the peak of the season some areas or schools need to be mowed twice. Mowing is accomplished with a variety of mowing machine to handle the small areas and mow around the trees and obstacles that are in the lawn area. Large areas of grass such as playgrounds, practice fields, soccer, football, baseball, and softball are mowed with wide area mowers.

The following is the list of the schools and how much acreage that it has. Acequia 13 acres, Rupert 12 acres, Heyburn 12 acres, Paul 6 acres, East 15 acres, West 16 acres, Mt. Harrison 4 acres, DSC\ TLC 4 acres, Minico 40 acres.

The following is the equipment that we have



Toro 580 D 1990 YR Parts  
hour production rate

1536 Hrs.

Toro 580 D 1900

3944 Hrs.

14 ft. cutting width with 13 acres per



Dixie chopper 72" 2010

Zero Turn

1582 Hrs.

Dixie Chopper 60" 2004

Zero Turn

1764 Hrs.

4 acres per hr. production rate



John Deere 1600 12 ft. 2006

2234 Hrs.

11 acres per hr. production rate.



Each school has a small riding tractor used to mow small areas at schools as well as snow removal. These were purchased in 2003-2016. I have been replacing a few of the smaller mowers.

I would propose that we lease purchase a Wide area mower to replace the worn out wide area mowers the district now operates.



The New Proposed Mower can mow 16 ft. wide and can mow up 17 acres an hour a top production. I am also requesting a sweeper broom attachment so that we can use it to remove light snow, broom dirt and debris from parking lots. This will allow us to have dirt and debris removed to paint parking lines and keep our property looking better.

The proposed lease time would be over a 4-year period. The budget cost for this mower is \$103,176.30 and the cost for the broom attachment is \$ 7,800.

Thank you for considering this proposal.

Theo Schut

Maintenance Supervisor

\* Please see attached article.

## Time's Up

By Matt Weber

### How to keep old equipment from impacting your bottom line.

At a certain point in every piece of landscape equipment's life, its owner must face the question of whether to keep it or sell it off and start with fresh equipment.

Some contractors trust their gut instinct, and when they feel equipment performance has diminished or requires an inordinate amount of extra service, they put the machine out to pasture. And while trusting gut instinct may adequately serve the needs of a contractor with just one or two crews' worth of equipment, for growing or established large contractors with dozens of crews, a more analytical approach is always more cost effective, according to green industry consultant and Certified Professional Landscape Estimator Jim Huston.

For landscape contractor Chris Urbauer, the question of whether to keep or sell his equipment is one that weighs heavily on him right now. Four of his five large mowers—three walk-behind and one zero-turn rider—have 1,400 or more hours on them, and while he's had great luck so far when it comes to avoiding major breakdowns, he knows the time is nearing for him to replace several of his mowers.

"To this point I've been lucky," Urbauer said. "None of my mowers have given me a bit of trouble, but I can tell the performance of the older mowers has diminished somewhat. It makes me think their replacement is imminent.

"We maintain our equipment well, and that makes a big difference, but I still wonder when the right time is to sell each of them off. I don't have enough years in the business to understand the realistic lifespan of my mowers. It would be very helpful to have a better handle on that."

The dilemma of whether to keep or retire equipment can be answered with relatively simple calculations, in tandem with the hour meter that is—or should be—on every engine-powered piece of equipment you or your crews use.

#### Knowledge is Power

Like virtually every other aspect of the landscape business, Huston says there is a formula for estimating the lifetime of any piece of equipment. And by "playing the numbers game," contractors can maximize the profit each machine brings.

The key is calculating the useful life of your equipment, tracking machines through their useful lifetime, and selling each piece before it reaches the late stages of its life, a period Huston calls the "maximum repair cycle," or the period of a machine's life when it's most likely to need major repairs or overhaul.

By calculating and tracking the useful life of a machine in hours, you isolate the decision from the fact that some contractors use the same equipment year-round, while others use the same pieces on a seasonal basis. Because a year-round contractor puts exponentially more hours on a piece of equipment than a seasonal contractor does, tracking useful life by hours in-use is the only way to objectively tell you where the machine is at in its life cycle.



## Calculating Useful Life

According to Huston, the engine is the primary component that determines equipment lifetime. As a general guideline, he says a modern commercial engine will give approximately 100 hours per horsepower for gasoline engines, and 125 hours per horsepower for diesel power plants.

While he agrees with Huston in that the engine is the primary component affecting equipment lifetime, industry expert Bob Brophy says from his experience, small equipment with lower horsepower such as aerators, seeders and dethatchers can easily exceed the 100-hour per horsepower estimation of useful lifetime. He says contractors simply need to diligently perform the preventative maintenance schedule recommended by the equipment or engine manufacturer.

"We're somewhat limited in our ability to make absolute predictions," Huston said. "We make assumptions on engine life based on our experience, and it's an average of all input we've seen—including machines that are very well cared for, and many that aren't cared for the way they should be. It's a numbers game, but typically you'll do pretty well. The useful life formula can take a lot of the guess work out of deciding whether to keep or sell equipment though."

Using Huston's calculations, the useful lives of Urbauer's mower fleet would be:

- 48-inch walk-behind, 17-hp gas. Useful life: 1,700 hours, currently at 1,400 hours (82-percent of useful life)
- 36-inch walk-behind, 15-hp gas. Useful life: 1,500 hours, currently at 1,500 hours (100-percent of useful life)
- 52-inch walk-behind, 19-hp gas. Useful life: 1,900 hours, currently at 1,600 hours (84-percent of useful life)
- 48-inch zero-turn rider, 21-hp gas. Useful life: 2,100 hours, currently at 1,400 hours (67-percent of useful life)
- 60-inch zero-turn rider, 27-hp gas. Useful life: 2,700 hours, currently at 600 hours (22-percent of useful life)

After doing the math, it's clear that Urbauer's gut instinct correlates well with Huston's calculations on machine life. All three of his walk-behind mowers are beyond 75-percent of their useful life, and one zero-turn is quickly approaching 75-percent, according to Huston's formula.

Huston's advice was clear and direct: "Chris, trade them in at 1,500 hours!"

"For a ride-on mower with a 2,000 hour lifetime, most guys I work with sell at about 1,500 hours, or 75-percent of its useful life," he said. "That way they are able to still sell it for a good price and they avoid the maximum repair cycle."

Brophy concurs. "Look on the trucks of successful contractors—you don't see old equipment on them. These guys keep their equipment fresh because they understand the true cost of equipment downtime—it's one that many smaller contractors underestimate."

"Anytime a crew in the field has to stop using a machine because of a breakdown, it's not just the cost of parts and labor the contractor incurs. That's the minor expense. The larger expense is the potential income that's lost because the machine was down and not available for use. Many contractors don't think about lost revenue potential as an expense, but it's one that is very real. You can't make money unless the equipment is up and running, and for time-sensitive add-on services like aeration or overseeding, it's difficult—if not impossible—to make up the income potential that's lost from an equipment breakdown."

By avoiding the maximum repair cycle, contractors are less likely to need major repairs or overhauls that can add to the overall lifetime cost of the machine. Because these unforeseen repairs are most often not accounted for in the cost of operation for the machine, they end up directly impacting the machine's profitability on the balance sheet.

## Tracking Useful Life

Tracking equipment through its useful life is a task that can be accomplished manually, but Huston says the tracking can be handled automatically using some of the readily-available business management and accounting software available today.

“I typically recommend a non-industry-specific accounting and business management software package,” Huston said. “Newer software allows tracking of individual pieces of equipment through their lifetime, and can keep a tally of total machine costs, of which machine hours is a component. It takes the guess work out of deciding whether to keep or sell your equipment.”

He says that Sage Timberline Office (<http://www.sage-timberlineoffice.com>) and Sage Master Builder (a recent acquisition by Sage from Intuit, <https://masterbuilder.intuit.com/>) are two popular business management/accounting software packages among his clients in the landscape market. Both have the scalability and cost accounting features needed to give contractors a clear picture of their equipment lifetime costs.

Many smaller contractors say they simply can't afford to spend several thousands of dollars on a high-end business management solution, instead employing more basic accounting software, often with the assistance of an outside accountant. Urbauer uses QuickBooks, which does not currently offer the ability to automatically track the useful life of his equipment. He says that, because his business is still at a size that he can manage effectively, he plans to track the useful life of his machines manually during routine maintenance using the hour meter on each machine, with calculations for useful life based on Huston's guidelines.

Whether you track your equipment's useful life manually, or use one of the electronic solutions available today to track machines through their lifetime hours, the information will give you the power to better understand where each piece of equipment is in its lifetime and avoid the additional costs associated with keeping machines that are past their prime.

Matt Weber is a freelance writer from Lincoln, Neb.

James R. Huston is author of How to Price Landscape & Irrigation Projects, and president of J.R. Huston Enterprises, a management consultant group for the green industry. Learn more at <http://www.jrhuston.biz/>.