



**Report of:**

***2010 National Ready Mixed Concrete Association Fleet  
Benchmarking and Costs Survey***

June, 2010

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***Introduction***

The National Ready Mixed Concrete Association (NRMCA) Fleet Benchmarking and Costs Survey was established to provide concrete producers with information to evaluate and benchmark ready mixed concrete fleet maintenance and utilization. The survey was developed and responses analyzed by the NRMCA Operations, Environmental and Safety (OES) Committee. For the ready mixed concrete industry, those involved in the day to day management of a fleet of mixer trucks are confronted with an ever changing array of business environments and thus a never ending array of decisions. The competitive nature of the business and long construction seasons makes operating a fleet of mixer trucks very demanding. What used to be a 9 month business in most northern climates has become a 12 month a year construction season. In the most recent years, the industry has witnessed a downturn in ready mixed concrete production the likes of which have not been seen since the great depression and at the same time a dramatic shift in management to one that includes expectations with no tolerance for unsatisfactory performance, forcing ready mixed concrete fleet managers to reevaluate their fleet, park trucks, sell trucks, reduce the work force and yet still maintain exceedingly high levels of reliability and cost efficiency day in

and day out. Most, if not all, successful ready mixed concrete producers have always measured themselves in one way or another, relying primarily on financial accounting principles.

Fleet operating statistics are measured to quantify current performance and to plan and budget for future improvements, whether it's downsizing to meet current demand levels or buying to meet future challenges. The real challenge is to know what to measure, when to measure and to know what constitutes good performance. Benchmarking allows the fleet manager, accountant or ready mixed concrete executive to identify and compare cost and other performance factors with industry averages as obtained from this survey. Once the fleet's management strategies and performance have been successfully benchmarked, the fleet manager has a tool to identify the unsatisfactory as well as the excellent performance areas of their fleet.



Benchmarking fleet statistics allows the ready mixed concrete industry to identify the areas that require change and facilitates continuous improvement of the fleet. Lacking complete understanding of the fleet's cost components and a strategy for adequate fleet replacement schedules is a significant issue in fleet management.

**Confidentiality**

The National Ready Mixed Concrete Association keeps all individual company and or divisional data submitted for the survey strictly confidential. After verification of all data entry and calculations, the Association destroys the entry forms and all tabulation records that specifically attribute data to a producer, division and plant. This policy was established to help elevate the level of participation and enhance the statistics through a strong sampling of the industry. NRMCA treats confidentiality with the highest priority and under no circumstances will release and single company results

**2010 Fleet Benchmarking Survey**

The 2010 Fleet Benchmarking Survey Form was sent to NRMCA member company's fleet managers, financial officers and primary contacts in January 2010 through the NRMCA enews weekly and was also posted on NRMCA's website, [www.nrmca.org](http://www.nrmca.org). An electronic format file of the survey form was distributed via email to the NRMCA membership as well. A target email campaign was also initiated where as all past survey applicants, the OES committee members and selected NRMCA database individuals were also sent electronic copies of the survey to further participation from NRMCA members. The deadline for all survey responses was April 1, 2010 (extended until April 15). The survey (attached in the appendix of this report) consisted of 70 fill-in-the-blank type questions. The form for 2010 was reviewed by the OES committee and Operations Task Group and approved for distribution. The survey response represents data for calendar year 2009. The fleet managers and financial officers were instructed to submit information to the extent available, if all questions could not be answered. The 70 survey questions were distributed in the following 10 sections:

<ul style="list-style-type: none"> <li>• Region</li> <li>• Mixer Fleet</li> <li>• Chassis Configuration</li> <li>• Fleet Performance</li> <li>• Fuel Consumption</li> </ul>	<ul style="list-style-type: none"> <li>• Mixer Maintenance</li> <li>• Tire Information</li> <li>• Preventive Maintenance</li> <li>• Front-End-Loaders</li> <li>• Benchmarking</li> </ul>
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### Survey Responses

Now in its twelfth year, the annual survey is limited to NRMCA member companies only. NRMCA received submissions from 87 companies or divisions (4% less than 2009). The usefulness of these fleet performance statistics are enhanced by the level of participation in the survey. Some items were not responded to by all participants. The percentage response is reported in each of the following sections and it is suggested by the authors that a response less than about 30% may not be statistically significant. Results of the survey are compiled nationally. Responses came from eight geographical regions which are mapped in the appendix of this report.

**Table 1: Geographical Distribution of Survey Responses in Percent**

US Region	% of Total Reponses	US Region	% of Total Reponses
Eastern	23%	North-Central	5%
Southeastern	22%	Rocky Mountain	6%
Great Lakes/Mid-West	13%	Pacific Northwest	3%
South-Central	16%	Pacific Southwest	13%

Due to the lack of instructions on the electronic submission form an additional question was asked of all participants to help better analyze this year’s data. Many producers have parked trucks recently. Some have removed tags but hope to bring the trucks back into service in the future. Participating companies were asked which of the following statements best described the data they had submitted.

**Table 2: Submitted Data Representation**

47%	A. Only your current operating fleet of mixers and not any parked trucks
18%	B. Your fleet of operating mixers as well as parked “tagged” mixers but no “untagged and parked” mixers
30%	C. All of you mixer fleet, operating and parked (tagged or not)
5%	D. We have no parked trucks and all trucks are operating

### Mixer Fleets

A total of 13,839 concrete mixer trucks are represented in the 2010 survey. In 2009 the survey represented 14,588 truck mixers. Using yards delivered per truck annually (survey question #64) and the estimated total US ready mixed concrete produced from the NRMCA website, one can estimate the number of ready mixed concrete trucks currently operating in the United States to be approximately 68,000. This is compared to an estimated 80,000 just a few years ago. On a national basis the severe recession in the ready mixed concrete industry started in the middle part of 2006 and the rate of decline in production peaked between the third and fourth quarters of 2009. Along with the reduction in production, most companies



have retired older mixers, sold off some of their fleet, and have parked and removed tags on other trucks.

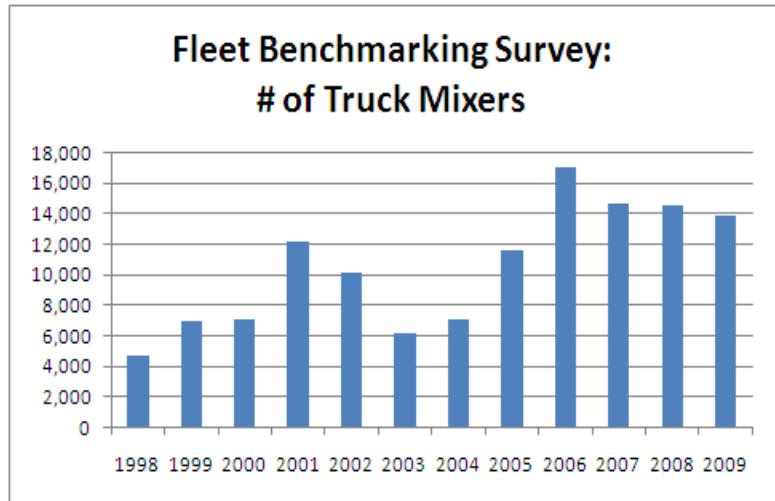
Based on data submitted, the average number of mixer trucks per company/division is 159 (down slightly from the 2009 report). This number continues to change every year due to consolidation, mergers, recession and demographics of those who participate in this survey. The median number (which may be more typical) for truck mixers in a fleet is 83. This means that about half of the companies who responded to the survey have 83 truck mixers or less and the other half reported more than 83 truck mixers.

The average age of a fleet by company and average age of the individual trucks was approximately the same as last year. The average fleet age for the 87 companies/divisions who responded to this question was 7.3 years, while the average age of individual truck was calculated to be 6.2 years.

*(Individual company number of trucks x fleet age / total number of trucks surveyed)*

These numbers reflect industry’s practice of retiring and selling off older vehicles while at the same time not replacing those vehicles with newer units. According to the Truck Mixer’s Manufacturer’s Bureau, sales of new truck mixers were lower than any time since the 1940’s.

In terms of sheer numbers, rear discharge mixers still dominate the survey representing 83% of all mixers. Front discharge mixers make up the remaining 17% of the truck mixers. It is interesting to note that 27% of all companies/divisions reporting do have mixed fleets with some front and some rear discharge mixers. Considering previous trends with fleets that include at least one mixer truck with a conveyor system attached, these data suggest that this frequency is about one in ten companies. Finally, 5% of the participating companies reported trailer mixers as part of their fleets, up slightly compared to last year’s survey.



**Table 3: Mixer Fleet Statistics**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Total Number</i>	<i>Average per company reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
<b>1</b>	# Trucks	87 (100%)	13,839	159	1,116	11	83
<b>2</b>	Age, Years	86 (99%)		7.3	13.1	2.4	7.2
<b>3</b>	Front Discharge	38 (44%)	2,383	61	342	2	36
<b>4</b>	Rear Discharge	74 (85%)	11,454	155	896	4	83
<b>5</b>	All Wheel Drive	29 (33%)	2,842	98	602	2	47
<b>6</b>	Conveyor Equipped	9 (10%)	37	4	9	1	3
<b>7</b>	Trailer Mixers	4 (5%)	243	61	180	2	31

### Chassis Configurations

Over the last several decades many variations in axle configuration have been developed in response to varying state weight laws. In 2007 an extra item number was included in the survey for a “2-axle” category. These mixers commonly do not require a driver with a commercial driver’s license (CDL). According to the 2010 Fleet Survey, three-axle and four-axle booster or pusher configurations are most common. This accounts for about 56 percent of the operating mixer trucks. In order to meet federal bridge weight restrictions and increase load carrying capacity, more ready mixed concrete trucks are using four or more axles. In the four-axle category, tail axles outnumber pushers by nearly 2-to-1. These data may be biased by the geographical distribution of responses and the pertinent state and local weight restrictions.



**Table 4: Summary of Chassis Configurations**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Total Number</i>	<i>Average per company reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
8	2-Axle	4 (5%)	4	2	2	2	2
9	3-Axle	39 (45%)	4,368	112	1,064	1	34
10	4-Axle/Booster	48 (55%)	3,421	71	544	2	43
11	4-Axle/Pusher	31 (36%)	1,996	63	667	2	23
12	5-Axle	38 (44%)	1,598	42	313	1	18
13	6-Axle	17 (20%)	1,294	81	384	1	39
14	7-Axle	4 (5%)	305	76	271	2	16



## *Fleet Performance*

The survey represents ready mixed concrete trucks that traveled more than 190 million miles. That's equal to more than 7,600 trips around the equator. The average annual mileage on a ready mixed concrete truck was 13,801 miles last year. This statistic is considerably lower than the high number recorded in the last 10 years of 18,896 (2006 survey) and can be contributed



to the reduction in ready mixed concrete production on a national basis.. Another interesting benchmarking data point is miles per cubic yard. This is calculated by dividing average truck miles by average total cubic yards delivered per truck. Nationally, that number this year is 3.65 miles/cubic yard. Miles per cubic yard can give a company an idea of how well its operation is able to acquire jobs close to the production facility. Naturally, large urban areas will have an advantage over more rural areas.

The average haul distance a truck mixer must travel will vary depending on location, type of construction, and commitment to customers. The average one-way haul distance for the 75 companies that reported data was 14.4 miles, which is one of the highest reported in the last 10 years.

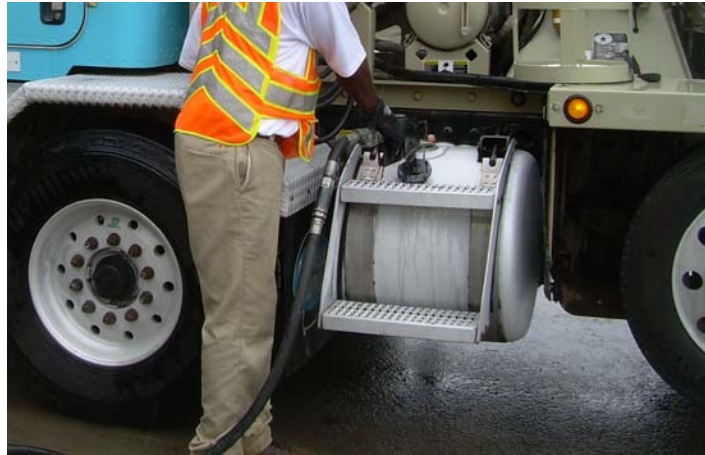
For this survey the average load size was 7.7 cubic yards and the average full load was 9.8 cubic yards, down slightly from a year ago. Important to a ready mixed concrete producer is the "load size coefficient" which can be calculated by dividing average load size by typical full load size and multiplying times 100 to convert to a percentage. In general, the higher the load size coefficient, the lower the cost of trucking per cubic yard. Of the 84 companies reporting both numbers, the calculated average load size coefficient was 79%, with a high of 100% and a low of 59%.

**Table 5: Summary of Fleet Performance**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Average per company reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
<b>16</b>	Annual Miles/Truck	<b>78 (90%)</b>	<b>13,801</b>	<b>35,000</b>	<b>2,384</b>	<b>12,838</b>
<b>17</b>	Annual Engine Hours	<b>71 (82%)</b>	<b>1,414</b>	<b>3,500</b>	<b>403</b>	<b>1,347</b>
<b>18</b>	Avg. One-Way Haul Distance, miles	<b>75 (86%)</b>	<b>14.4</b>	<b>38.0</b>	<b>5.0</b>	<b>13.5</b>
<b>19</b>	Avg. Load Size, cu. yd.	<b>84 (97%)</b>	<b>7.7</b>	<b>10.0</b>	<b>5.6</b>	<b>7.7</b>
<b>20</b>	Typical Full Load Size, cu. yd.	<b>87 (100%)</b>	<b>9.8</b>	<b>11.0</b>	<b>7.5</b>	<b>10.0</b>

### Fuel Consumption

One of the major costs in operating a ready mixed concrete fleet is fuel consumption. In the last few years our industry has seen unprecedented price swings for diesel and gasoline. Unfortunately it appears that by all accounts that trend will continue for at least the near future. Fuel consumption factors can be measured in many different ways. Typical “miles per gallon” (*mpg*) is used as a measure by many “long haul” trucking companies. In the ready mixed concrete industry, although most companies track *mpg*



data, it does not provide a true picture of fuel usage considering that a mixer truck spends varying amount of time at idle, mixing concrete or off-road travel. In this survey, 83% of those companies who reported fuel consumption data, reported *mpg*, while 85% reported fuel consumption in “fuel cost per yard”. The price paid per gallon of fuel can also be calculated from data reported by companies on the basis of both “Gallon per Cubic Yard” and “Fuel Costs per Cubic Yard”:

$$\text{Price per Gallon} = \text{Fuel Cost per yd}^3 / \text{Gallons per yd}^3$$

The median fuel cost according to this survey was \$2.58 per gallon; an increase of \$0.85 or about 25% lower than the average fuel cost in 2008. Fuel costs per cubic yard are also down from \$3.67 per yard in 2008 to \$2.81 per yard in 2009, again about a 25% decrease. Important to this industry is the percentage of fuel usage for power-take-off (PTO) energy use. This information, however, cannot be determined from the reported data. In 2006 NRMCA with cooperation of its member companies conducted a national study on PTO fuel usage. The data and final report was made available to the Federal Internal Revenue Service for consideration to rebate ready mixed concrete producers for excise taxes paid on this portion of fuel use. The study estimated PTO fuel use to be approximately 20 to 25% of total fuel consumption.

**Table 6: Summary of Fuel Usage**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Average per Company Reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
21	Miles Per Gallon	72 (83%)	3.38	7.0	2.1	3.2
22	Fuel, gal./hr.	56 (64%)	2.77	7.10	0.3	2.9
23	Fuel, gal./yd <sup>3</sup>	74 (85%)	1.10	4.30	0.44	1.05
24	Fuel, \$/yd <sup>3</sup>	85 (98%)	\$2.81	\$6.25	\$1.45	\$2.74

## *Fleet Maintenance Expenses*

Maintenance costs associated with fleet operations represent a major expense to the ready mixed concrete producer. In past years, data reveal that cost of fleet maintenance is directly related to the average age of the fleet. In general, a younger fleet will have lower maintenance costs. Although, with technology ever advancing, new equipment and devices are being placed on mixers, most require at least some additional maintenance. The total maintenance cost is calculated by the sum of cost of parts, outside repair services, shop expenses, cost of tires, and cost for mobile communication.



**Table 7: Summary of Fleet Maintenance Costs**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Average per Company Reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
<b>25</b>	Parts: \$/ yd <sup>3</sup>	<b>83 (95%)</b>	<b>\$ 0.96</b>	<b>\$ 2.99</b>	<b>\$ 0.17</b>	<b>\$ 0.81</b>
<b>26</b>	Shop: \$/ yd <sup>3</sup>	<b>78 (90%)</b>	<b>\$ 1.44</b>	<b>\$ 4.85</b>	<b>\$ 0.02</b>	<b>\$ 1.44</b>
<b>27</b>	Outside Repairs: \$/ yd <sup>3</sup>	<b>68 (78%)</b>	<b>\$ 0.51</b>	<b>\$ 10.50</b>	<b>\$ 0.01</b>	<b>\$ 0.21</b>
<b>28</b>	Radio: \$/ yd <sup>3</sup>	<b>64 (74%)</b>	<b>\$ 0.15</b>	<b>\$ 1.26</b>	<b>\$ 0.01</b>	<b>\$ 0.11</b>
<b>29</b>	Tires & Tubes: \$/ yd <sup>3</sup>	<b>81 (93%)</b>	<b>\$ 0.35</b>	<b>\$ 0.74</b>	<b>\$ 0.12</b>	<b>\$ 0.33</b>
<b>30</b>	TOTAL (23-27)	<b>85 (98%)</b>	<b>\$ 2.93</b>	<b>\$ 12.26</b>	<b>\$ 0.62</b>	<b>\$ 2.93</b>
<b>31</b>	Wrecker Costs: \$/ yd <sup>3</sup>	<b>55 (63%)</b>	<b>\$ 0.04</b>	<b>0.38</b>	<b>\$ 0.01</b>	<b>\$ 0.03</b>
<b>31B</b>	Wrecker Costs: \$/eng hr	<b>8 (9%)</b>	<b>\$ 0.05</b>	<b>\$ 0.13</b>	<b>\$ 0.01</b>	<b>\$ 0.05</b>
<b>32</b>	Accident Repair Cost: \$/ yd <sup>3</sup>	<b>41 (47%)</b>	<b>\$ 0.06</b>	<b>\$ 0.32</b>	<b>\$ 0.01</b>	<b>\$ 0.03</b>
<b>32B</b>	Accident Repair Cost: \$/eng hr	<b>12 (14%)</b>	<b>\$ 0.24</b>	<b>\$ 0.87</b>	<b>\$ 0.01</b>	<b>\$ 0.14</b>
<b>33</b>	Truck Wash: \$/yd <sup>3</sup>	<b>58 (67%)</b>	<b>\$ 0.15</b>	<b>\$ 1.63</b>	<b>\$ 0.01</b>	<b>\$ 0.10</b>
<b>33B</b>	Truck Wash: \$/vehicle/year	<b>18 (21%)</b>	<b>\$352.01</b>	<b>\$1425.82</b>	<b>\$ 0.28</b>	<b>\$ 350.00</b>

**Tires**

Tires are an essential factor in determining costs associated with ready mixed concrete fleets. Of the 87 companies who reported, 3% allow recaps on the steer axle tires. On the other hand, 70% of all reporting companies allow the use of recaps on the drive or trailer axle tires. The maximum number of recaps allowed on a casing ranged from one to six with an average of just over two.



The survey also provides an estimate of the cost to the producer for a breakdown due to a tire failure. After removing one outlier, this average cost was \$146.79 in 2009. Another interesting number derived from the data is road-calls per truck per year. On average, a ready mixed concrete company makes 2.9 road calls related to tire failures per year for every 100 trucks in their fleet.

**Table 8: Summary of Tire Information**

Item	Description	Companies Reporting (Percent)		Average per Company Reporting	High	Low	Median
34	Recaps for steer tires =YES	87 (100%)	3 (3%)				
	=NO		84 (97%)				
35	Max # recap/casing	3 (3%)		1.3	2	1	1
36	Recaps for drive tires & lift axles = YES	87 (100%)	61 (70%)				
	= NO		26 (30%)				
37	If yes to 36, max # of recaps per tire	89 (90%)		2.2	6	1	2
38	Capitalize cost of tires/new mixers? =YES	87 (100%)	35 (43%)				
	=NO		47 (57%)				
39	Avg # road calls/month	74 (85%)		5.3	44	0.3	2.0
40	Avg lost hours./road call	72 (83%)		1.9	12.0	0.5	1.5
41	Avg cost/tire-related breakdown	69 (79%)		\$146.79	\$450	\$35	\$146
42	Tire pressure checked Intervals =DAILY	22 ..(25%)					
	=WEEKLY	40..(46%)					
	=BIWEEKLY	8.. (9%)					
	=MONTHLY	17.. (20%)					
43	Tire check done by: =DRIVER	51 .. (59%)					
	=MECHANIC	20 .. (23%)					
	=TIRE SERVICE	16 .. (18%)					

### Preventive Maintenance

In order to maintain an efficient ready mixed concrete truck fleet all producers recognize the need for *Preventive Maintenance* (PM). The concept of PM is to carefully service and inspect each truck in the fleet at regular intervals to minimize the number of breakdowns. A good PM program predicts breakdown frequency and necessary repairs. This allows servicing to be scheduled at optimum times before the breakdown occurs. Typical PM drain intervals are calculated in terms of hours of engine running time. Historically, manufacturers have recommended PM drain services at a frequency of about 300 hrs. Our survey results for calendar year 2009 reveals that about three-fourth of all producers base drain intervals on engine hours and surprisingly, none base their drain intervals on oil analysis.



**Table 9: Summary of Preventive Maintenance Statistics**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Average per company reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
44	Basis for PM Drain Interval,	87 (100%)				
	=MILEAGE	8 (9%)				
	=ENGINE HOURS	71 (82%)				
	=CALENDAR DAYS	4 (5%)				
	=FUEL CONSUMPTION	4 (5%)				
	=OIL ANALYSIS	0 (0%)				



## Mixer Drums

Since 2006 the survey has included a section concerning drum chipping operations. Historically, drum chipping has been performed by drivers during slow or off-peak times. In today's fast-paced industry, an increasing number of producers have elected to contract drum chipping to outside vendors. The survey allows us to estimate about how many producers are using an outside service for drum chipping. That number turns out to be about 65%.



New technology has come to our industry, within the past few years, that now enables a ready mixed concrete producer to use a non-entry-system for drum cleaning. This system uses high pressure water to clean hardened concrete from the drum while the operator remains safely outside. Also in this year's survey are addition questions which include costs of drum chipping.

A good PM program is necessary to ensure long mixer-drum life. In this survey, the average service life of a mixer-drum was determined to be 7.1 years, while delivering nearly 39,000 yards of concrete. The life of a drum is dependent on a number of factors including the hardness of the aggregate used in concrete. An aggregate made of very hard granite might wear out a steel drum with only 10,000 yards of concrete delivered, while, on the other hand, using a soft marine limestone might allow the same drum to deliver about 60,000 cubic yards. (Due to an error in the electronic submission no data is available for question #48.)



**Table 10: Summary of Mixer Drums Statistics**

Item	Description	Companies Reporting (Percent)		Average per company reporting	High	Low	Median
45	Drum Chipping by:	Driver	15 (17%)				
		Maint.	6 (7%)				
		Outside Service	65 (76%)				
46	Drum Chipping Frequency (months)	85 (98%)	7.0	30	2	6	
47	Cost per Cleaning	58 (67%)	\$203.34	\$949	\$20	\$150	
47B	Chipping Cost (per truck per year)	45 (52%)	\$401.37	\$2,000	\$65	\$300	
48	Capitalize Drum Cost?	No data available					
	= YES						
	= NO						
49	Avg Drum Life/years.	83 (95%)	7.1	12.0	3.4	7.0	
49B	Avg Drum Life/yd <sup>3</sup>	69 (79%)	38,645	74,250	15,700	35,000	

## Front End Loaders

Essential to a ready mixed concrete production facility is its front-end loader fleet. This piece of equipment is vital to both production rate and product quality. Keeping the loader in good working condition is mandatory for a successful operation. This survey, representing more than 1,700 loaders from 85 companies, reveals the average age of a loader is 10.8 years. The data also shows that a company, on average, operates 1 loader for every 10 truck mixers.

**Table 11: Summary of Front End Loader Statistics**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Average per company reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
<b>50</b>	# Loaders	85 (96%)	20	176	1	10
<b>51</b>	Avg age, years.	83 (95%)	10.8	28.3	1	10.0
<b>52</b>	Capitalize Loader Engine Rebuilds? = YES	82 (84%)	35 (44%)			
	= NO		44 (56%)			
<b>53A</b>	Loader parts: \$/yd <sup>3</sup>	62 (71%)	\$0.13	\$0.86	\$0.01	\$0.10
<b>53B</b>	Loader parts: \$/eng hr.	19 (22%)	\$5.02	\$16.74	\$1.96	\$3.82
<b>54A</b>	Loader shop exp.: \$/yd <sup>3</sup>	45 (52%)	\$0.27	\$2.96	\$0.01	\$0.10
<b>54B</b>	Loader. shop exp: \$/eng. hr.	17 (20%)	\$5.27	\$17.55	\$0.01	\$4.40
<b>55A</b>	Loader outside repair: \$/yd <sup>3</sup>	44 (51%)	\$0.12	\$0.35	\$0.01	\$0.08
<b>55B</b>	Loader outside repair: \$/eng.hr.	16 (18%)	\$2.99	\$14.31	\$0.49	\$1.35
<b>56A</b>	Tire/Tube: \$/yd <sup>3</sup>	53 (61%)	\$0.06	\$0.40	\$0.01	\$0.04
<b>56B</b>	Tire/Tube: \$/eng. hr.	17 (20%)	\$1.67	\$4.40	\$0.10	\$1.58
<b>57A</b>	TOTAL: \$/yd <sup>3</sup> (from 53-56)	59 (60%)	\$0.43	\$2.81	\$0.05	\$0.21
<b>57B</b>	TOTAL \$/eng. hr. (from 43-56)	28 (28%)	\$11.26	\$32.61	\$1.03	\$9.60
<b>58</b>	Loader Fuel: gal/eng. hr.	51 (59%)	3.19	10.0	0.40	3.0
<b>59</b>	Loader Fuel: gal/ yd <sup>3</sup>	58 (67%)	0.13	1.20	0.01	0.08
<b>60</b>	Loader Fuel: \$/yd <sup>3</sup>	72 (83%)	\$0.30	\$3.25	\$0.04	\$0.19

## Benchmarking

Of utmost importance to a ready mixed concrete production facility is its ability to measure and monitor key ratios used to quantify productivity. Parked trucks due to low driver availability can be very costly. Driver availability rates are generally calculated daily for each plant and averaged on a monthly or yearly basis. The ready mixed concrete industry measures fleet statistics to track the efficiency and effectiveness of equipment PM and repair programs. Factors that affect the Fleet Availability ratios are PM programs, average age of the fleet, parts availability, competency of mechanics and warranties. Fleet Utilization is another key ratio that matches the number of available drivers with available trucks with a goal of 100% utilization. This can be quite difficult in markets that experience driver shortages. Dispatch efficiency is determined as the (driver hours worked – driver standby hours)/driver hours worked.



The OES committee also asked producers for backing accidents and roll-over incidents. The data reveal those who reported at least one rollover the rollover rate per 100 trucks is 1.3 and for those companies reporting at least one backing accident the rate is 6.7 backing accidents per 100 trucks. The benchmarking data in this section are not included in Table 13, “Trend analysis”, of this report.

**Table 12: Summary of Benchmarking Statistics**

<i>Item</i>	<i>Description</i>	<i>Companies Reporting (Percent)</i>	<i>Total #</i>	<i>Average per Company Reporting</i>	<i>High</i>	<i>Low</i>	<i>Median</i>
61	Driver Availability Annually, %	69 (79%)		90.1%	100%	55%	91%
62	Fleet Availability Annually, %	70 (80%)		90.9%	100%	45%	94%
63	Fleet Utilization Annually, %	67 (77%)		81.5%	100%	48%	82%
64	Concrete delivered per truck annually, yd <sup>3</sup>	81 (93%)		3,780	6,700	1,958	3,578
65	Dispatch Efficiency Annually	56 (64%)		78.8%	100%	37%	80%
66	Rollovers in 2009	93 (81%)	57	0.7	9	0	0
67	Backing Accidents in 2009	71 (82%)	446	6.3	36	0	4
68	Volumetric Mixers = YES	0 (0%)					
	= NO	83 (96%)					
69	Number of Volumetric Mixers?	0 (0%)					
70	Concrete delivered by volumetric mixers, yd <sup>3</sup>	0 (0%)					

## Yearly Comparison

**Table 13: Trend Analysis**

<i>Data for Year</i>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>
<i>Number of Companies Participating</i>	87	90	82	99	56	46	41	80	75	67	68
<i>Number of Trucks</i>	13,839	14,588	14,609	17,080	11,591	7,114	6,211	10,120	12,116	7035	6,987
<i>Average Fleet Age, years</i>	7.3	7.4	6.1	6.8	6.5	7.0	8.1	7.4	6.8	7.4	8.9
<i>Average Truck Age, years</i>	6.2	-	-	6.2	6.2	6.7	6.7	6.7	6.4	6.8	7.6
<i>Front Discharge, Percent</i>	17.2%	17.0%	19.0%	15.7%	23%	16%	26%	29%	18%	18%	14%
<i>Rear Discharge, Percent</i>	82.8%	83.0%	81.0%	82.3%	77%	84%	74%	71%	82%	83%	86%
<i>Average Annual Mileage per Truck, miles</i>	13,801	15,062	17,755	17,976	18,896	16,895	16,952	18,437	16,954	16,987	19,760
<i>Average Haul Distance, One Way, miles</i>	14.4	14.2	14.1	14.6	12.1	14.3	13.0	12.1	13.4	12.2	12.0
<i>Average Load Size, yd<sup>3</sup></i>	7.7	7.8	8.1	8.1	8.2	7.9	8.0	7.7	7.9	8.00	7.57
<i>Average "Typical Full Load" size, yd<sup>3</sup></i>	9.8	9.7	9.8	9.6	9.8	9.8	10	9.7	9.6	9.7	9.47
<i>Fuel Usage: miles per gallon</i>	3.38	3.38	3.40	3.60	3.60	3.79	3.6	3.87	3.93	3.83	4.03
<i>Fuel Usage: gallons per yd<sup>3</sup></i>	1.10	1.07	1.06	1.16	0.99	0.85	1.0	0.95	0.94	1.07	1.21
<i>Fuel Usage: \$ per yd<sup>3</sup></i>	\$2.81	\$3.67	\$2.80	\$2.55	\$2.15	\$1.72	\$1.36	\$1.22	\$1.37	\$ 1.35	\$ 1.32
<i>Parts Expense: \$ per yd<sup>3</sup></i>	\$0.96	\$1.14	\$1.07	\$1.12	\$0.98	\$0.93	\$1.06	\$1.05	\$0.98	\$ 1.06	\$ 1.18
<i>Shop expense: \$ per yd<sup>3</sup></i>	\$1.44	\$1.53	\$1.55	\$1.46	\$1.26	\$1.33	\$1.29	\$1.50	\$1.05	\$ 1.29	\$ 1.27
<i>Tires &amp; Tubes: \$ per yd<sup>3</sup></i>	\$0.35	\$0.31	\$0.31	\$0.33	\$0.31	\$0.33	\$0.30	\$0.29	\$0.34	\$ 0.31	\$ 0.40
<i>Total Maintenance Cost: \$ per yd<sup>3</sup></i>	\$3.40	\$3.58	\$3.52	\$3.21	\$2.70	\$2.87	\$2.79	\$3.03	\$2.59	\$ 3.22	\$ 3.31
<i>Recaps for Steer Tires?</i>	3%	7%	7%	8%	0%	7%	5%	9%	16%	16%	20%
<i>Recaps for Drive Tires?</i>	-	-	93%	95%	96%	93%	95%	96%	96%	92%	96%
<i>Avg Cost per road call (Tire Related)</i>	\$146.79	175.15	\$139.39	\$175.57	\$162.15	\$147.34	\$135.62	\$135.11	\$127.51	\$126.11	\$118.60
<i>PM Drain Interval, Eng. Hr.</i>	82%	78%	71%	424	447	449	419	387	375	328	303
<i>PM Drain Interval, Days</i>	5%	7%	18%	112	90	94	87	148	128	102.6	95
<i>PM Drain Interval, miles</i>	9%	12%	7%	6,636	6,250	4,722	4,556	5,205	5,125	4,667	4,836
<i>Truck Mixer to Mechanics Ratio</i>	13.9	13.3	13.5	13.6	13.4	13.2	13.4	12.2	12.7	11.1	12.6
<i>Average Mixer Drum Service Life, years</i>	7.1	6.8	5.7	5.5	5.6	5.7	5.9	6.0	5.7	5.9	6.3
<i>Average Mixer Drum Service Life yd<sup>3</sup></i>	38,645	36,232	39,052	32,850	36,840	31,178	36,757	32,078	33,869	31,048	34,226
<i>Number of Front-end Loaders</i>	1,708	1,758	1,537	1495	1033	758	634	1030	1281	637	999
<i>Average Loader age, years</i>	10.8	9.9	9.0	9.0	10.0	10.4	12	10.6	9.0	13.0	11.0
<i>Avg. Loader Maintenance: \$/ yd3</i>	\$0.59	\$0.54	\$0.51	\$0.43	\$0.48	\$0.24	\$0.19	\$0.24	\$0.24	\$ 0.24	\$ 0.37
<i>Avg. Loader Maintenance: \$/engine hour</i>	\$5.02	\$12.93	\$12.69	\$11.26	\$9.09	\$6.38	\$4.19	\$6.61	\$6.47	\$ 5.35	\$ 3.61

## Acknowledgements

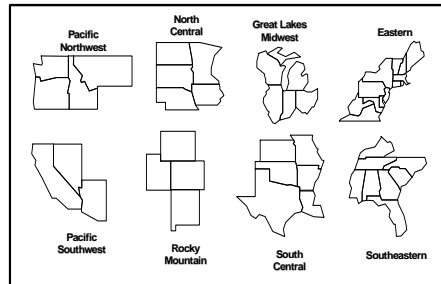
The authors would like to thank all the companies and individuals who spent the time to voluntarily participate in the survey. It is due to their efforts that these data can be used by the entire industry to benchmark valuable industry specific fleet information. While the participation level has grown, the reliability of these industry benchmarks can improve by increasing the sample size. Readers of this report are encouraged to submit responses for the 2011 Survey. Forms will be available on or about January 1, 2011 at [www.nrmca.org](http://www.nrmca.org).

**Table 14: Participating Companies**

<i>Company</i>	<i>Reported By:</i>		<i>Company</i>	<i>Reported By:</i>	
Advance Ready Mix Concrete Inc	Jerry	Wild	Kuhlman Corporation	Patrick	Ferry
Altaview Concrete	Ben	Covington	Livingston's Concrete Service, Inc.	Jo-Ann	McIntire
Arkholo Sand & Gravel APAC Central	Ricky	Osburn	Manatts	Denny	Gallagher
Atlas-Tuck Concrete	Christopher	O'Kelley	Martin Limestone Inc	Donald	Graves
Bode Concrete	Tod	Knudsen	Maschmeyer Concrete Company of Florida	Brian	Curtis
Builder's Concrete & Supply Co., Inc.	Bill	Wiley	Metro Ready Mix Concrete LLC	Michael	Zagula
C&D Concrete	David	Williams	MMC Materials, Inc.	Chris	Cascio
Cadman Inc	Mike	Keller	Mobley Construction Co. Inc.	Bryce	Mobley
CalPortland	Graham	Hardwick	Natl. Ready Mixed Concrete Co.	Jay	Shah
Calportland	Robert	Fink	OMG Midwest, Inc	Zach	Bandstra
CalPortland Co.	Raul	Argueta	Ozinga Ready Mix Concrete, Inc.	Jessica	Miazga
CalPortland Construction	Toby	Goodwin	Pennsy Supply	Matthew	Dunn
Calportland-Tucson District	Gary	Dykman	Potomac Construction Industries	Michael	Abbruzzese
Capital Concrete Inc.	Wayne	Bolton	Powhatan Ready Mix	Shae	Fender
Carew Concrete	John	Carew	Preferred Materials, Inc.	Kenny	Laing
Carolina Sunrock LLC	Michael	Berry	PRM Concrete Corporation	Kevin	McHale
Carroll Concrete	Jeff	Loudermilk	R.W. Sidle, Inc.	David	Lintern
CEMEX	Larry	Bruffy	Razorback Concrete Company	Bill	Johnson
Cemstone Products Company	Tim	Becken	Ready Mix USA, LLC	Bill	Roy
Cemstone Ready Mix, Inc.	Jim	Dewall	Ready Mixed Concrete Company	Bob	Haun
Central Concrete Supply	Steve	Brussee	Redimix Companies, Inc	John	Rath
Centre Concrete Company	Holly	Harpster	Redi-Mix Concrete	Bill	Scheller
Chandler Concrete Co Inc.	Jeff	Hinkle	S & W Ready Mix Concrete Co.	Danny	Bordeaux
Chaney Enterprises	David	Williams	Schwarz Ready Mix/BCM OK	Jake	Seay
Concrete Company of Springfield	John	Holiman	Silver St. Mat / Calportland SONV	Andrew	Gude
Concrete Supply Co.	Henry	Batten	Smith's Ready Mix, inc.	Hix	Smith
Consolidated Concrete Co	Lisa	Bell	Southern Concrete Materials	Donnie	Parsell
Dolomite Group Concrete	Fritz	Odenbach	Southern Star Concrete	Dan	Hilton
Eastern Concrete Materials, Inc.	Bill	Steele	Spurlino Materials	Jim	Spurlino
ESSROC Ready Mix dba Arrow Concrete	Brent	Edwards	Staker Parson Companies	Rod	Griffiths
Essroc Ready Mix, dba; Crider and Shockey	Mark	Kane	Superior Materials LLC	Gary	Lowell
Evans Construction Company	Mitch	Lewis	Tarmac America	Eddie	Clements
Geiger Ready Mix Co Inc.	Richard	Tucker	Teichert Readymix	Allen	Ketchum
Hanson Aggregates	John	Doerfler	Titan Virginia Ready Mix- SOVA	Tony	Thomas
Harrison Ready Mix	Jerry	Brannen	Titan Virginia Ready Mix-Northern Region	Shae	Fender
Howlin Concrete Inc.	Derek	Taylor	Transit Mix Concrete & Materials Co	Brett	Johnston
Ingram Concrete	Christy	Ludwick	United Materials, LLC	James	Pierce
Irving Materials, Inc.	Shawn	Burgess	Vulcan Materials - Northern Concrete Division	Ken	Nehilla
Kirkpatrick Concrete	David	Black	Vulcan Materials Corp, Florida Rock Division	Dennis	Upchurch

## Appendix I 2010 Fleet Benchmarking & Costs Survey Executive Summary

### Region



### Mixer Fleet

- 1 Total # of Truck Mixers
- 2 Average Fleet Age

### Breakdown of Truck Mixers by Type

- 3 # Front Discharge Units
- 4 # Rear Discharge Units
- 5 # All-Wheel Drive Trucks
- 6 # Mixers Equipped w/ Belt Conveyors
- 7 # Trailer Mixers

### Breakdown of Truck Mixers by Chassis Configuration :

- 8 2 Axles
- 9 3 Axles
- 10 4 Axles (booster)
- 11 4 Axles (pusher)
- 12 5 Axles
- 13 6 Axles
- 14 7 Axles

### Miscellaneous Fleet Performance Information

- 15 Truck Mixer-to-Mechanic Ratio
- 16 Average Annual Mileage per Truck Mixer
- 17 Average Annual Engine Hours per Truck Mixer
- 18 Avg. Haul Distance (miles, *one way*)
- 19 Average Load Size (Yards<sup>3</sup>)
- 20 Typical Full Load Size (Yards<sup>3</sup>)

### 2010 Report Results

		<i>Regional</i>	
Total #	20	Eastern	
Total #	19	Southeastern	
Total #	11	G.Lakes/ Midwest	
Total #	14	South Central	
Total #	4	North Central	
Total #	5	Rocky Mountain	
Total #	3	Pacific Northwest	
Total #	11	Pacific Southwest	
		Median	
Total #	13,839	Truck Mixers	83
Nat. Average	7.3	Years	7.15
		% of total	
Total #	2,383	Fronts	17.2%
Total #	11,454	Rears	82.8%
Total #	2,842	All-Wheel Drive	20.5%
Total #	37	w/Conveyors	0.3%
Total #	243	Trailer Mixers	1.8%
		% of total	
Total #	4	2 Axles	0.03%
Total #	4,368	3 Axles	31.6%
Total #	3,421	4 Axles (booster)	24.7%
Total #	1,966	4 Axles (pusher)	14.2%
Total #	1,598	5 Axles	11.5%
Total #	1,294	6 Axles	9.4%
Total #	305	7 Axles	2.2%
		Median	
Nat. Average	13.9	Mixers/Mech.	12.5
Nat. Average	13,801	Miles	12,838
Nat. Average	1,414	Eng. Hours	1,347
Nat. Average	14.4	Haul Distance	13.5
Nat. Average	7.7	Yd <sup>3</sup>	7.705
Nat. Average	9.8	Yd <sup>3</sup>	10

### 2009 Report (Avg) Results / Notes

Total #	22	Eastern
Total #	17	Southeastern
Total #	8	G.Lakes/ Midwest
Total #	14	South Central
Total #	5	North Central
Total #	6	Rocky Mountain
Total #	5	Pacific Northwest
Total #	13	Pacific Southwest

2009: 14,588 (90 companies) median 94
2009: 7.4 years
2009: 17 %
2009: 83 %
2009: 18.9% includes most fronts + some rears owned by 9 out of 84 companies/divisions
2009: 2.2% of total mixers
2009: 0.04% of total mixers
2009: 32.0% of total mixers
2009: 24.7% of total mixers
2009: 12.9% of total mixers
2009: 15.8% of total mixers
2009: 12.1% of total mixers
2009: 2.2% of total mixers
2009: 13.3 mixers per mechanic
2009: 15,062 miles
2009: 1,513 engine hours
2009: 14.2 miles
2009: 7.8 cubic yards
2009: 9.7 cubic yards

## Appendix I 2010 Fleet Benchmarking & Costs Survey Executive Summary

### Truck Mixer Diesel Fuel Consumption

- 21 Miles per Gallon
- 22 Gallons per Engine Hour
- 23 Gallons per Cubic Yard
- 24 Fuel Costs per Cubic Yard

### Truck Mixer Maintenance Costs

- 25 Parts Expense per Cubic Yard
- 26 Shop Expense per Cubic Yard
- 27 Outside Repair Costs per Cubic Yard
- 28 Radio Expense
- 29 Tire Expenses per Cubic Yard
- 30 *Maintenance Cost TOTAL (from questions 25-29)*
- 31 Wrecker Costs (per Cubic Yard)  
or (\$/Engine Hour)
- 32 Accident Repairs (per Cubic Yard)  
or (\$/Engine Hour)
- 33 Truck Wash Cleaning Products Costs (per Cubic Yard)  
or (\$-per-Vehicle-per-Year)

### Tire-Related Information

- 34 Do You Use Retreads on Steer Tires?
- 35 ...if yes, maximum # of recaps per casing
- 36 Do You Use Retreads on Drive Tires & Lifiable Axles?
- 37 ...if yes, maximum # of recaps per casing
- 38 Do you Capitalize the Cost of Tires on New Mixers?
- 39 Typical # of Road Calls per Month due to Tire Problems?
- 40 Typical Time Lost per Tire-related Road Call? (Hours)
- 41 Avg. Cost of Tire-related Breakdown (*Not incl. Tire Cost*)?
- 42 How often is tire pressure checked?
- 43 Who checks tire pressure?

2010 Report			Median
Nat. Average	3.38	miles/gal	3.18
Nat. Average	2.77	Gal/Eng hr.	2.90
Nat. Average	1.10	Gals/Yd <sup>3</sup>	1.03
Nat. Average	\$ 2.81	\$/Yd <sup>3</sup>	\$ 2.74
Nat. Average	\$ 0.96	\$/Yd <sup>3</sup>	\$ 0.81
Nat. Average	\$ 1.44	\$/Yd <sup>3</sup>	\$ 1.44
Nat. Average	\$ 0.51	\$/Yd <sup>3</sup>	\$ 0.21
Nat. Average	\$ 0.15	\$/Yd <sup>3</sup>	\$ 0.11
Nat. Average	\$ 0.35	\$/Yd <sup>3</sup>	\$ 0.33
Nat. Average	\$ 3.40	\$/Yd <sup>3</sup>	\$ 2.93
Nat. Average	\$ 0.04	\$/Yd <sup>3</sup>	\$ 0.03
Nat. Average	\$ 0.05	\$/Engine Hour	\$ 0.05
Nat. Average	\$ 0.06	\$/Yd <sup>3</sup>	\$ 0.03
Nat. Average	\$ 0.24	\$/Engine Hour	\$ 0.14
Nat. Average	\$ 0.15	\$/Yd <sup>3</sup>	\$ 0.10
Nat. Average	\$ 352.01	\$/Truck/Year	\$ 350.00
<b>87 responses: 3% Yes / 97% No</b>			
	1.3	recaps/casing	1.0
<b>Data not available</b>			
	2.3	recaps/casing	2.0
<b>87 responses: 43% Yes / 57% No</b>			
	2.9	per 100 mixers	
	1.9	Hours Lost	1.5
	\$ 146.79	\$/breakdown	\$ 146.00
<b>87 responses: Totals &amp; Percentages</b>			
Daily	22	25%	
Weekly	40	46%	
Bi-weekly	8	9%	
Monthly	17	20%	
<b>87 responses: Totals &amp; Percentages</b>			
Driver	51	59%	
Mechanic	20	23%	
Tire Service	16	18%	

2009 Report (Average) Results / Notes
2009: 3.38 miles per gallon
2009: 2.98 gallons per eng. hour
2009: 1.07 gallons per cubic yard
2009: \$3.67 fuel cost per cu. yd.
2009: \$1.14 per cu. yd.
2009: \$1.53 per cu. yd.
2009: \$0.47 per cu. yd.
2009: \$0.14 per cu. yd.
2009: \$0.31 per cu. yd.
2009: \$3.58 per cu. yd.
2009: \$0.03 per cu. yd.
2009: \$0.07 per engin hr..
2009: \$0.07 per cu. yd.
2009: \$0.18 per engine hr..
2009: \$0.17 per cu. yd.
2009: \$349.49 per cu. yd.
2009: 7% Yes, 93% No
2009: 1.7 recaps per casing
2009: data not available
2009: 2.3 recaps per casing
2009: 48% Yes, 52% No
2009: 2.8 per 100 truck mixers
2009: 1.9 Hours
2009: \$175.15
2009: 27%
2009: 42%
2009: 11%
2009: 21%
2009: 53%
2009: 18%
2009: 30%

## Appendix I 2010 Fleet Benchmarking & Costs Survey Executive Summary

Crankcase Drain Interval (truck mixer engine)

44 Basis of PM Interval

2010 Report			Median
<b>87 responses: Totals &amp; Percentages</b>			
Mileage	8	9%	
Engine Hours	71	82%	
Calendar Days	4	5%	
Fuel Consumption	4	5%	
Oil Analysis	0	0%	

Mixer Drums, Drum Chipping, Service Life, Etc.

45 Who Performs Drum Chipping?

86 responses: Totals & Percentages			
Driver	15	17%	
Mechanic/Other	6	7%	
Outside Service	65	75%	

46 How Often are Drums Chipped Out? (Average, in months)

Nat. Average	7.0	months	6.0
Nat. Average	\$ 203.24	\$/per cleaning	\$ 150.00
Nat. Average	\$ 401.37	\$/truck per yr.	\$ 300.00

47 Average Drum Chipping Cost (per cleaning)  
or per Truck Mixer-per-Year

48 Do you Capitalize the Cost of Replacement Drums?

Data not available

49 Average Drum Service Life: (Years + 10ths, e.g., 8.5)  
Average Drum Service Life: (Cubic Yards)

Nat. Average	7.1	Years	7
Nat. Average	38,645	Yd <sup>3</sup>	35,000

Front End Loaders

50 Total # of Front-end Loaders

Total #	1,708	# Loaders	
Average	10.8	Years	10.0

51 Average Loader Age (Years)

52 Do you Capitalize Loader Engine Rebuilds/Overhauls?

82 responses: 44% Yes / 56% No

Front End Loader Maintenance Costs

53 Parts Expense (per Cubic Yard)  
or (\$/Engine Hour)

Average	\$ 0.13	\$/Yd <sup>3</sup>	\$ 0.10
Average	\$ 5.02	\$/Eng. Hr.	\$ 3.82

54 Shop Expense (per Cubic Yard)  
or (\$/Engine Hour)

Average	\$ 0.27	\$/Yd <sup>3</sup>	\$ 0.10
Average	\$ 5.27	\$/Eng. Hr.	\$ 4.40

55 Outside Repair Costs (per Cubic Yard)  
or (\$/Engine Hour)

Average	\$ 0.12	\$/Yd <sup>3</sup>	\$ 0.08
Average	\$ 2.99	\$/Eng. Hr.	\$ 1.35

56 Tire Expense (per Cubic Yard)  
or (\$/Engine Hour)

Average	\$ 0.06	\$/Yd <sup>3</sup>	\$ 0.04
Average	\$ 1.67	\$/Eng. Hr.	\$ 1.35

57 TOTAL - per Cubic Yard (from questions 53 - 56)  
TOTAL - per Engine Hour (from questions 53 - 56)

Average	\$ 0.59	\$/Yd <sup>3</sup>	\$ 0.28
Average	\$ 14.96	\$/Eng. Hr.	\$ 10.90

Loader Diesel Fuel Consumption

58 Gallons per Engine hour

Average	3.19	Gal/Eng Hr.	
Average	0.13	Gals/Yd <sup>3</sup>	

59 Gallons per Cubic Yard

60 Loader Fuel Costs per Cubic Yard

Average	\$ 0.30	\$/Yd <sup>3</sup>	
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**2009 Report (Avg) Results / Notes**

2009: 12%
2009: 78%
2009: 7%
2009: 3%
2009: 0%
2009: 9%
2009: 9% (included misc. workers)
2009: 80%
2009: every 6.7 months
2009: \$185.64
2009: \$403.83
2009: Data not available
2009: 6.8 years
2009: 36,232 cubic yards
2009: 1,758
2009: 9.9 years
2009: 39% Yes, 61% No
2009: \$0.13 per cu. yd.
2009: \$3.93 per eng. hour
2009: \$0.24 per cu. yd.
2009: \$4.18 per eng. hour
2009: \$0.10 per cu. yd.
2009: \$3.01 per eng. hour
2009: \$0.07 per cu. yd.
2009: \$1.81 per eng. hour
2009: \$0.54 per cu. yd.
2009: \$12.93 per eng. hour
2009: 3.83 gal per eng. hour
2009: 0.47 gals per cu. yd.
2009: \$0.43 per cu. yd.

## Appendix I 2010 Fleet Benchmarking & Costs Survey Executive Summary

### Additional Benchmarking Items

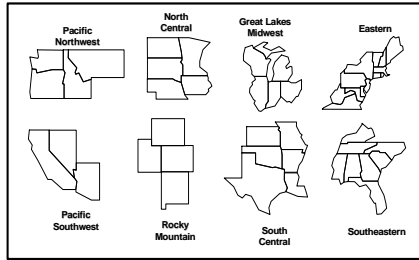
- 61** Driver Availability % (Available Drivers/Total Drivers)
- 62** Fleet Availability % (Available Mixers / Total Mixers)
- 63** Fleet Utilization % (Available Drivers/ Available Mixers)
- 64** Cubic Yards Delivered per Truck Mixer
- 65** Dispatch Efficiency (Drivers Hr. - Standby Hr./Drivers Hr.)
- 66** Number of Rollover Incidents in 2008 (on or off road)
- 67** Number of Truck Mixer Backing Accidents in 2008
- 68** Does Fleet include any Volumetric Mixers?
- 69** If Yes, How Many Volumetric Mixers?
- 70** If Yes, how Many cu. yd. per Volumetric Mixer per Year

2010 Report			Median
<b>Average</b>	90.1%	% Annually	91.0%
<b>Average</b>	90.9%	% Annually	94.0%
<b>Average</b>	81.5%	% Annually	82.0%
<b>Average</b>	3,780	Yd <sup>3</sup> /Truck/Year	3,578
<b>Average</b>	78.8%	% Annually	80.0%
<b>Average</b>	0.4	per 100 mixers	
<b>Average</b>	3.2	per 100 mixers	
<b>83 responses: 0 Yes / 83 No</b>			
<b>Total #</b>	0	# Volumetrics	
<b>Average</b>	0	Yd <sup>3</sup> /Year	

2009 Report (Avg) Results / Notes
2009: <b>91.3%</b>
2009: <b>92.8%</b>
2009: <b>82.8%</b>
2009: <b>4376</b> Yd <sup>3</sup> /Truck/Year
2009: <b>77.0%</b>
2009: <b>0.6</b> per 100 truck mixers
2009: <b>3.3</b> per 100 truck mixers
2009: 1 yes / 61 No
2009: <b>7</b> Volumetric Mixers
2009: <b>753</b> cu. yds. per year

## Appendix II Regional Data

### Region



#### Mixer Fleet

- 1 Total # of Truck Mixers
- 2 Average Fleet Age

#### Breakdown of Truck Mixers by Type

- 3 # Front Discharge Units
- 4 # Rear Discharge Units
- 5 # All-Wheel Drive Trucks
- 6 # Mixers Equipped w/ Belt Conveyors
- 7 # Trailer Mixers

#### Breakdown of Truck Mixers by Chassis Configuration :

- 8 2 Axles
- 9 3 Axles
- 10 4 Axles (booster)
- 11 4 Axles (pusher)
- 12 5 Axles
- 13 6 Axles
- 14 7 Axles

#### Miscellaneous Fleet Performance Information

- 15 Truck Mixer-to-Mechanic Ratio
- 16 Average Annual Mileage per Truck Mixer
- 17 Average Annual Engine Hours per Truck Mixer
- 18 Avg. Haul Distance (miles, one way)
- 19 Average Load Size (Yards<sup>3</sup>)
- 20 Typical Full Load Size (Yards<sup>3</sup>)

### 2010 Eastern Region Results

		Region	
Total #	19	Eastern	
Total #	0	Southeastern	
Total #	0	G.Lakes/ Midwest	
Total #	0	South Central	
Total #	0	North Central	
Total #	0	Rocky Mountain	
Total #	0	Pacific Northwest	
Total #	0	Pacific Southwest	
			Median
Total #	1,733	Truck Mixers	1,733
Reg. Average	7.5	Years	7.6
			% of total
Total #	328	Fronts	18.9%
Total #	1,404	Rears	81.0%
Total #	254	All-Wheel Drive	14.7%
Total #	23	w/Conveyors	1.3%
Total #	0	Trailer Mixers	0.0%
			% of total
Total #	2	2 Axles	0.12%
Total #	0	3 Axles	26.4%
Total #	15	4 Axles (booster)	36.3%
Total #	1	4 Axles (pusher)	26.8%
Total #	2	5 Axles	10.3%
Total #	0	6 Axles	0.1%
Total #	0	7 Axles	0.0%
			Median
Average	13.6	Mixers/Mech.	12.95
Average	12515.1	Miles	12,400
Average	1409.6	Eng. Hours	1,345
Average	13.6	Haul Distance	13.5
Average	7.7	Yd <sup>3</sup>	7.735
Average	9.8	Yd <sup>3</sup>	10

### 2010 Southeastern Region Results

		Region	
Total #	0	Eastern	
Total #	19	Southeastern	
Total #	0	G.Lakes/ Midwest	
Total #	0	South Central	
Total #	0	North Central	
Total #	0	Rocky Mountain	
Total #	0	Pacific Northwest	
Total #	0	Pacific Southwest	
			Median
Total #	4,760	Truck Mixers	4,760
Reg. Average	6.9	Years	6.5
			% of total
Total #	645	Fronts	13.6%
Total #	4,115	Rears	86.4%
Total #	619	All-Wheel Drive	13.5%
Total #	8	w/Conveyors	0.2%
Total #	0	Trailer Mixers	0.0%
			% of total
Total #	2	2 Axles	0.04%
Total #	0	3 Axles	50.8%
Total #	12	4 Axles (booster)	13.5%
Total #	1	4 Axles (pusher)	26.4%
Total #	2	5 Axles	6.9%
Total #	0	6 Axles	2.5%
Total #	0	7 Axles	0.0%
			Median
Average	15.4	Mixers/Mech.	14.2
Average	15739.7	Miles	14,418
Average	1396.4	Eng. Hours	1,228
Average	15.4	Haul Distance	15
Average	7.5	Yd <sup>3</sup>	2.89
Average	9.6	Yd <sup>3</sup>	0.86

## Appendix II Regional Data, cont'd

### Truck Mixer Diesel Fuel Consumption

- 21 Miles per Gallon
- 22 Gallons per Engine Hour
- 23 Gallons per Cubic Yard
- 24 Fuel Costs per Cubic Yard

### Truck Mixer Maintenance Costs

- 25 Parts Expense per Cubic Yard
- 26 Shop Expense per Cubic Yard
- 27 Outside Repair Costs per Cubic Yard
- 28 Radio Expense
- 29 Tire Expenses per Cubic Yard
- 30 *Maintenance Cost TOTAL (from questions 25-29)*
- 31 Wrecker Costs (per Cubic Yard)  
or (\$/Engine Hour)
- 32 Accident Repairs (per Cubic Yard)  
or (\$/Engine Hour)
- 33 Truck Wash Cleaning Products Costs (per Cubic Yard)  
or (\$-per-Vehicle-per-Year)

### Tire-Related Information

- 34 Do You Use Retreads on Steer Tires?
- 35 ...if yes, maximum # of recaps per casing
- 36 Do You Use Retreads on Drive Tires & Lifiable Axles?
- 37 ...if yes, maximum # of recaps per casing
- 38 Do you Capitalize the Cost of Tires on New Mixers?
- 39 Typical # of Road Calls per Month due to Tire Problems?
- 40 Typical Time Lost per Tire-related Road Call? (Hours)
- 41 Avg. Cost of Tire-related Breakdown (*Not incl. Tire Cost*)?
- 42 How often is tire pressure checked?

- 43 Who checks tire pressure?

2010 Eastern Region			Median
Average	3.31	miles/gal	\$ 3.07
Average	2.86	Gal/Eng hr.	\$ 3.10
Average	1.16	Gals/Yd <sup>3</sup>	\$ 1.10
Average	\$3.06	\$/Yd <sup>3</sup>	\$ 2.96
Average	\$1.27	\$/Yd <sup>3</sup>	\$ 1.11
Average	\$1.38	\$/Yd <sup>3</sup>	\$ 1.51
Average	\$0.27	\$/Yd <sup>3</sup>	\$ 0.22
Average	\$0.19	\$/Yd <sup>3</sup>	\$ 0.11
Average	\$0.41	\$/Yd <sup>3</sup>	\$ 0.37
Average	\$3.34	\$/Yd <sup>3</sup>	\$ 3.50
Average	\$0.05	\$/Yd <sup>3</sup>	\$ 0.03
Average	\$0.01	\$/Engine Hour	\$ 0.01
Average	\$0.06	\$/Yd <sup>3</sup>	\$ 0.03
Average	\$0.49	\$/Engine Hour	\$ 0.49
Average	\$0.10	\$/Yd <sup>3</sup>	\$ 0.09
Average	\$332.11	\$/Truck/Year	\$ 368.53
	0%	Yes	
	0.0	recaps/casing	0.0
Data not available			
	-	recaps/casing	-
	44%	Yes	
	2.9	per 100 mixers	
	1.9	Hours Lost	2.0
	\$178.44	\$/breakdown	150.0
<b>19 responses: Totals &amp; Percentages</b>			
Daily	3	16%	
Weekly	11	58%	
Bi-weekly	3	16%	
Monthly	2	11%	
<b>19 responses: Totals &amp; Percentages</b>			
Driver	11	58%	
Mechanic	6	32%	
Tire Service	2	11%	

2010 Southeastern Region			Median
Average	3.41	miles/gal	\$ 3.40
Average	2.67	Gal/Eng hr.	\$ 2.65
Average	1.39	Gals/Yd <sup>3</sup>	\$ 1.10
Average	\$3.11	\$/Yd <sup>3</sup>	\$ 2.89
Average	\$0.96	\$/Yd <sup>3</sup>	\$ 0.86
Average	\$1.37	\$/Yd <sup>3</sup>	\$ 1.40
Average	\$0.19	\$/Yd <sup>3</sup>	\$ 0.15
Average	\$0.14	\$/Yd <sup>3</sup>	\$ 0.14
Average	\$0.37	\$/Yd <sup>3</sup>	\$ 0.34
Average	\$2.87	\$/Yd <sup>3</sup>	\$ 2.82
Average	\$0.04	\$/Yd <sup>3</sup>	\$ 0.03
Average	\$0.05	\$/Engine Hour	\$ 0.05
Average	\$0.08	\$/Yd <sup>3</sup>	\$ 0.05
Average	\$0.06	\$/Engine Hour	\$ 0.06
Average	\$0.15	\$/Yd <sup>3</sup>	\$ 0.16
Average	\$548.46	\$/Truck/Year	\$ 548.46
	11%	Yes	
	1.5	recaps/casing	1.5
Data not available			
	-	recaps/casing	-
	35%	Yes	
	8.0	per 100 mixers	
	2.0	Hours Lost	2.0
	\$142.92	\$/breakdown	140.5
<b>19 responses: Totals &amp; Percentages</b>			
Daily	6	32%	
Weekly	10	53%	
Bi-weekly	2	11%	
Monthly	1	5%	
<b>19 responses: Totals &amp; Percentages</b>			
Driver	17	89%	
Mechanic	1	5%	
Tire Service	1	5%	

## Appendix II Regional Data, cont'd

Crankcase Drain Interval (truck mixer engine)

44 Basis of PM Interval

2010 Eastern Region			Median
<b>19 responses: Totals &amp; Percentages</b>			
Mileage	1	5%	
Engine Hours	13	68%	
Calendar Days	1	5%	
Fuel Consumption	4	21%	
Oil Analysis	0	0%	

Mixer Drums, Drum Chipping, Service Life, Etc.

45 Who Performs Drum Chipping?

2010 Eastern Region			Median
<b>19 responses: Totals &amp; Percentages</b>			
Driver	5	26%	
Mechanic/Other	3	16%	
Outside Service	11	58%	

46 How Often are Drums Chipped Out? (Average, in months)

Average	7.6	months	6.0
Average	\$211.52	\$/per cleaning	\$ 225.00
Average	\$373.52	\$/truck per yr.	\$ 230.00

47 Average Drum Chipping Cost (per cleaning)  
or per Truck Mixer-per-Year

48 Do you Capitalize the Cost of Replacement Drums?

49 Average Drum Service Life: (Years + 10ths, e.g., 8.5)  
Average Drum Service Life: (Cubic Yards)

Data not available			
Average	7.1	Years	7
Average	35,400	Yd <sup>3</sup>	30,000

Front End Loaders

50 Total # of Front-end Loaders

51 Average Loader Age (Years)

52 Do you Capitalize Loader Engine Rebuilds/Overhauls?

Total #	197	# Loaders	
Average	10.8	Years	9.8
	19%	Yes	

Front End Loader Maintenance Costs

53 Parts Expense (per Cubic Yard)  
or (\$/Engine Hour)

54 Shop Expense (per Cubic Yard)  
or (\$/Engine Hour)

55 Outside Repair Costs (per Cubic Yard)  
or (\$/Engine Hour)

56 Tire Expense (per Cubic Yard)  
or (\$/Engine Hour)

57 TOTAL - per Cubic Yard (from questions 53 - 56)  
TOTAL - per Engine Hour (from questions 53 - 56)

Average	\$0.15	\$/Yd <sup>3</sup>	\$ 0.14
Average	\$0.00	\$/Eng. Hr.	\$ -
Average	\$4.59	\$/Yd <sup>3</sup>	\$ 3.50
Average	\$0.36	\$/Eng. Hr.	\$ 0.13
Average	\$8.99	\$/Yd <sup>3</sup>	\$ 7.00
Average	\$0.11	\$/Eng. Hr.	\$ 0.08
Average	\$3.57	\$/Yd <sup>3</sup>	\$ 3.57
Average	\$0.04	\$/Eng. Hr.	\$ 0.04
Average	\$1.67	\$/Yd <sup>3</sup>	\$ 1.40
Average	\$0.49	\$/Eng. Hr.	\$ 0.31

Loader Diesel Fuel Consumption

58 Gallons per Engine hour

59 Gallons per Cubic Yard

60 Loader Fuel Costs per Cubic Yard

Average	2.74	Gal/Eng Hr.	
Average	0.00	Gals/Yd <sup>3</sup>	
Average	\$0.23	\$/Yd <sup>3</sup>	

**2010 Southeastern Region**

**19 responses: Totals & Percentages**

Mileage	0	0%
Engine Hours	19	100%
Calendar Days	0	0%
Fuel Consumption	0	0%
Oil Analysis	0	0%

**19 responses: Totals & Percentages**

Driver	0	0%
Mechanic/Other	0	0%
Outside Service	19	100%
Average	7.8	months
Average	\$229.83	\$/per cleaning
Average	\$452.10	\$/truck per yr.

**Data not available**

Average	7.2	Years
Average	35,688	Yd <sup>3</sup>

Total #	713	# Loaders
Average	9.1	Years
	17%	Yes

Average	\$0.19	\$/Yd <sup>3</sup>
Average	\$0.00	\$/Eng. Hr.
Average	\$4.67	\$/Yd <sup>3</sup>
Average	\$0.26	\$/Eng. Hr.
Average	\$5.01	\$/Yd <sup>3</sup>
Average	\$0.14	\$/Eng. Hr.
Average	\$2.50	\$/Yd <sup>3</sup>
Average	\$0.08	\$/Eng. Hr.
Average	\$2.44	\$/Yd <sup>3</sup>
Average	\$0.50	\$/Eng. Hr.

Average	2.96	Gal/Eng Hr.
Average	0.00	Gals/Yd <sup>3</sup>
Average	\$0.55	\$/Yd <sup>3</sup>

## Appendix II Regional Data, cont'd

### Additional Benchmarking Items

- 61 Driver Availability % (Available Drivers/Total Drivers)
- 62 Fleet Availability % (Available Mixers / Total Mixers)
- 63 Fleet Utilization % (Available Drivers/ Available Mixers)
- 64 Cubic Yards Delivered per Truck Mixer
- 65 Dispatch Efficiency (Drivers Hr. - Standby Hr./Drivers Hr.)
- 66 Number of Rollover Incidents in 2008 (on or off road)
- 67 Number of Truck Mixer Backing Accidents in 2008
- 68 Does Fleet include any Volumetric Mixers?
- 69 If Yes, How Many Volumetric Mixers?
- 70 If Yes, how Many cu. yd. per Volumetric Mixer per Year

2010 Eastern Region			Median
<b>Average</b>	89.3%	% Annually	90.5%
<b>Average</b>	91.6%	% Annually	94.0%
<b>Average</b>	75.4%	% Annually	76.0%
<b>Average</b>	3,490	Yd <sup>3</sup> /Truck/Year	3,445
<b>Average</b>	81.4%	% Annually	86.6%
<b>Average</b>	0.3	per 100 mixers	
<b>Average</b>	5.1	per 100 mixers	
	0%	Yes	
<b>Total #</b>	0	# Volumetrics	
<b>Average</b>	0	Yd <sup>3</sup> /Year	

2010 Southeastern Region			Median
<b>Average</b>	86.6%	% Annually	90.0%
<b>Average</b>	85.1%	% Annually	90.0%
<b>Average</b>	82.1%	% Annually	100.0%
<b>Average</b>	3,600	Yd <sup>3</sup> /Truck/Year	3,366
<b>Average</b>	77.1%	% Annually	76.5%
<b>Average</b>	0.5	per 100 mixers	
<b>Average</b>	2.6	per 100 mixers	
	6%	Yes	
<b>Total #</b>	0	# Volumetrics	
<b>Average</b>	0	Yd <sup>3</sup> /Year	



**Appendix II Regional Data, cont'd.**

<i>Truck Mixer Diesel Fuel Consumption</i>		<b>2010 G Lakes /Mid West Region</b>			<b>Median</b>	<b>2010 South Central Region</b>			<b>Median</b>
<b>21</b>	Miles per Gallon	<i>Average</i>	3.07	miles/gal	\$ 3.05	<i>Average</i>	3.25	miles/gal	\$ 3.27
<b>22</b>	Gallons per Engine Hour	<i>Average</i>	2.72	Gal/Eng hr.	\$ 2.90	<i>Average</i>	2.53	Gal/Eng hr.	\$ 2.64
<b>23</b>	Gallons per Cubic Yard	<i>Average</i>	1.05	Gals/Yd <sup>3</sup>	\$ 1.06	<i>Average</i>	0.91	Gals/Yd <sup>3</sup>	\$ 0.90
<b>24</b>	Fuel Costs per Cubic Yard	<i>Average</i>	\$2.67	\$/Yd <sup>3</sup>	\$ 2.66	<i>Average</i>	\$2.54	\$/Yd <sup>3</sup>	\$ 2.56
<i>Truck Mixer Maintenance Costs</i>									
<b>25</b>	Parts Expense per Cubic Yard	<i>Average</i>	\$0.88	\$/Yd <sup>3</sup>	\$ 0.77	<i>Average</i>	\$0.66	\$/Yd <sup>3</sup>	\$ 0.66
<b>26</b>	Shop Expense per Cubic Yard	<i>Average</i>	\$1.42	\$/Yd <sup>3</sup>	\$ 1.52	<i>Average</i>	\$0.80	\$/Yd <sup>3</sup>	\$ 0.75
<b>27</b>	Outside Repair Costs per Cubic Yard	<i>Average</i>	\$0.19	\$/Yd <sup>3</sup>	\$ 0.12	<i>Average</i>	\$0.74	\$/Yd <sup>3</sup>	\$ 0.32
<b>28</b>	Radio Expense	<i>Average</i>	\$0.09	\$/Yd <sup>3</sup>	\$ 0.05	<i>Average</i>	\$0.19	\$/Yd <sup>3</sup>	\$ 0.15
<b>29</b>	Tire Expenses per Cubic Yard	<i>Average</i>	\$0.27	\$/Yd <sup>3</sup>	\$ 0.27	<i>Average</i>	\$0.38	\$/Yd <sup>3</sup>	\$ 0.36
<b>30</b>	<i>Maintenance Cost TOTAL (from questions 25-29)</i>	<i>Average</i>	\$2.82	\$/Yd <sup>3</sup>	\$ 2.93	<i>Average</i>	\$2.52	\$/Yd <sup>3</sup>	\$ 2.58
<b>31</b>	Wrecker Costs (per Cubic Yard)	<i>Average</i>	\$0.01	\$/Yd <sup>3</sup>	\$ 0.01	<i>Average</i>	\$0.05	\$/Yd <sup>3</sup>	\$ 0.03
	or (\$/Engine Hour)	<i>Average</i>	\$0.02	\$/Engine Hour	\$ 0.02	<i>Average</i>	\$0.06	\$/Engine Hour	\$ 0.06
<b>32</b>	Accident Repairs (per Cubic Yard)	<i>Average</i>	\$0.03	\$/Yd <sup>3</sup>	\$ 0.02	<i>Average</i>	\$0.04	\$/Yd <sup>3</sup>	\$ 0.04
	or (\$/Engine Hour)	<i>Average</i>	\$0.02	\$/Engine Hour	\$ 0.02	<i>Average</i>	\$0.18	\$/Engine Hour	\$ 0.18
<b>33</b>	Truck Wash Cleaning Products Costs (per Cubic Yard)	<i>Average</i>	\$0.06	\$/Yd <sup>3</sup>	\$ 0.06	<i>Average</i>	\$0.21	\$/Yd <sup>3</sup>	\$ 0.19
	or (\$-per-Vehicle-per-Year)	<i>Average</i>	\$258.71	\$/Truck/Year	\$ 193.00	<i>Average</i>	-	\$/Truck/Year	-
<i>Tire-Related Information</i>									
<b>34</b>	Do You Use Retreads on Steer Tires?		0%	Yes			0%	Yes	
<b>35</b>	...if yes, maximum # of recaps per casing		0.0	recaps/casing	0.0		0.0	recaps/casing	0.0
<b>36</b>	Do You Use Retreads on Drive Tires & Lifiable Axles?	<i>Data not available</i>				<i>Data not available</i>			
<b>37</b>	...if yes, maximum # of recaps per casing		-	recaps/casing	-		-	recaps/casing	-
<b>38</b>	Do you Capitalize the Cost of Tires on New Mixers?		67%	Yes			29%	Yes	
<b>39</b>	Typical # of Road Calls per Month due to Tire Problems?		3.2	per 100 mixers			8.0	per 100 mixers	
<b>40</b>	Typical Time Lost per Tire-related Road Call? (Hours)		1.8	Hours Lost	1.7		4.7	Hours Lost	1.5
<b>41</b>	Avg. Cost of Tire-related Breakdown ( <i>Not incl. Tire Cost</i> )?		\$120.88	\$/breakdown	149.4		\$129.58	\$/breakdown	125.0
<b>42</b>	How often is tire pressure checked?	<b>12 responses: Totals &amp; Percentages</b>				<b>14 responses: Totals &amp; Percentages</b>			
		<i>Daily</i>	3	25%		<i>Daily</i>	8	57%	
		<i>Weekly</i>	4	33%		<i>Weekly</i>	4	29%	
		<i>Bi-weekly</i>	0	0%		<i>Bi-weekly</i>	0	0%	
		<i>Monthly</i>	5	42%		<i>Monthly</i>	2	14%	
<b>43</b>	Who checks tire pressure?	<b>12 responses: Totals &amp; Percentages</b>				<b>14 responses: Totals &amp; Percentages</b>			
		<i>Driver</i>	8	67%		<i>Driver</i>	9	64%	
		<i>Mechanic</i>	3	25%		<i>Mechanic</i>	1	7%	
		<i>Tire Service</i>	1	8%		<i>Tire Service</i>	4	29%	

**Appendix II Regional Data, cont'd.**

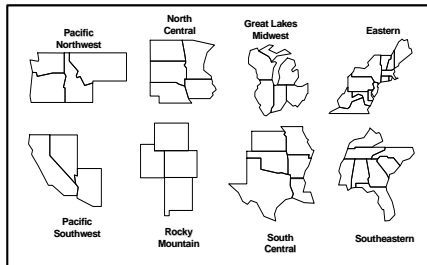
	2010 G Lakes /Mid West Region			Median	2010 South Central Region			Median
<u>Crankcase Drain Interval (truck mixer engine)</u>								
<b>44</b> Basis of PM Interval	<b>12 responses: Totals &amp; Percentages</b>				<b>14 responses: Totals &amp; Percentages</b>			
	Mileage	1	8%		Mileage	4	0%	
	Engine Hours	11	92%		Engine Hours	8	57%	
	Calendar Days	0	0%		Calendar Days	2	14%	
	Fuel Consumption	0	0%		Fuel Consumption	0	0%	
	Oil Analysis	0	0%		Oil Analysis	0	0%	
<u>Mixer Drums, Drum Chipping, Service Life, Etc.</u>								
<b>45</b> Who Performs Drum Chipping?	<b>12 responses: Totals &amp; Percentages</b>				<b>14 responses: Totals &amp; Percentages</b>			
	Driver	6	50%		Driver	3	23%	
	Mechanic/Other	0	0%		Mechanic/Other	1	8%	
	Outside Service	6	50%		Outside Service	9	69%	
<b>46</b> How Often are Drums Chipped Out? (Average, in months)	Average	7.5	months	6.0	Average	6.0	months	6.0
<b>47</b> Average Drum Chipping Cost (per cleaning)	Average	\$176.64	\$/per cleaning	\$ 155.00	Average	\$189.11	\$/per cleaning	\$ 150.00
or per Truck Mixer-per-Year	Average	\$364.17	\$/truck per yr.	\$ 405.00	Average	\$607.50	\$/truck per yr.	\$ 300.00
<b>48</b> Do you Capitalize the Cost of Replacement Drums?	Data not available				Data not available			
<b>49</b> Average Drum Service Life: (Years + 10ths, e.g., 8.5)	Average	8.6	Years	8	Average	7.8	Years	8
Average Drum Service Life: (Cubic Yards)	Average	44,438	Yd <sup>3</sup>	47,000	Average	42,793	Yd <sup>3</sup>	40,000
<u>Front End Loaders</u>								
<b>50</b> Total # of Front-end Loaders	Total #	168	# Loaders		Total #	309	# Loaders	
<b>51</b> Average Loader Age (Years)	Average	10.5	Years	10.0	Average	13.6	Years	12.1
<b>52</b> Do you Capitalize Loader Engine Rebuilds/Overhauls?		67%	Yes			77%	Yes	
<u>Front End Loader Maintenance Costs</u>								
<b>53</b> Parts Expense (per Cubic Yard)	Average	\$0.10	\$/Yd <sup>3</sup>	\$ 0.08	Average	\$0.13	\$/Yd <sup>3</sup>	\$ 0.14
or (\$/Engine Hour)	Average	\$0.00	\$/Eng. Hr.	\$ -	Average	\$0.00	\$/Eng. Hr.	\$ -
<b>54</b> Shop Expense (per Cubic Yard)	Average	\$2.70	\$/Yd <sup>3</sup>	\$ 2.78	Average	\$4.11	\$/Yd <sup>3</sup>	\$ 4.11
or (\$/Engine Hour)	Average	\$0.10	\$/Eng. Hr.	\$ 0.05	Average	\$0.18	\$/Eng. Hr.	\$ 0.15
<b>55</b> Outside Repair Costs (per Cubic Yard)	Average	\$1.33	\$/Yd <sup>3</sup>	\$ 1.33	Average	\$3.60	\$/Yd <sup>3</sup>	\$ 3.60
or (\$/Engine Hour)	Average	\$0.09	\$/Eng. Hr.	\$ 0.05	Average	\$0.15	\$/Eng. Hr.	\$ 0.16
<b>56</b> Tire Expense (per Cubic Yard)	Average	\$0.84	\$/Yd <sup>3</sup>	\$ 0.85	Average	\$0.93	\$/Yd <sup>3</sup>	\$ 0.93
or (\$/Engine Hour)	Average	\$0.09	\$/Eng. Hr.	\$ 0.03	Average	\$0.09	\$/Eng. Hr.	\$ 0.06
<b>57</b> TOTAL - per Cubic Yard (from questions 53 - 56)	Average	\$1.63	\$/Yd <sup>3</sup>	\$ 0.96	Average	\$1.78	\$/Yd <sup>3</sup>	\$ 1.78
TOTAL - per Engine Hour (from questions 53 - 56)	Average	\$0.33	\$/Eng. Hr.	\$ 0.19	Average	\$0.34	\$/Eng. Hr.	\$ 0.26
<u>Loader Diesel Fuel Consumption</u>								
<b>58</b> Gallons per Engine hour	Average	2.55	Gal/Eng Hr.		Average	12.98	Gal/Eng Hr.	
<b>59</b> Gallons per Cubic Yard	Average	0.00	Gals/Yd <sup>3</sup>		Average	0.00	Gals/Yd <sup>3</sup>	
<b>60</b> Loader Fuel Costs per Cubic Yard	Average	\$0.23	\$/Yd <sup>3</sup>		Average	\$0.28	\$/Yd <sup>3</sup>	

## Appendix II Regional Data, cont'd.

<i>Additional Benchmarking Items</i>	<i>2010 G Lakes /Mid West Region</i>			<i>Median</i>	<i>2010 South Central Region</i>			<i>Median</i>
<b>61</b> Driver Availability % (Available Drivers/Total Drivers)	<b>Average</b>	<b>92.0%</b>	<b>% Annually</b>	<b>91.7%</b>	<b>Average</b>	<b>92.5%</b>	<b>% Annually</b>	<b>93.3%</b>
<b>62</b> Fleet Availability % (Available Mixers / Total Mixers)	<b>Average</b>	<b>91.5%</b>	<b>% Annually</b>	<b>94.5%</b>	<b>Average</b>	<b>90.8%</b>	<b>% Annually</b>	<b>90.5%</b>
<b>63</b> Fleet Utilization % (Available Drivers/ Available Mixers)	<b>Average</b>	<b>91.1%</b>	<b>% Annually</b>	<b>88.0%</b>	<b>Average</b>	<b>78.2%</b>	<b>% Annually</b>	<b>74.5%</b>
<b>64</b> Cubic Yards Delivered per Truck Mixer	<b>Average</b>	<b>3,645</b>	<b>Yd<sup>3</sup>/Truck/Year</b>	<b>3,481</b>	<b>Average</b>	<b>4,015</b>	<b>Yd<sup>3</sup>/Truck/Year</b>	<b>3,974</b>
<b>65</b> Dispatch Efficiency (Drivers Hr. - Standby Hr./Drivers Hr.)	<b>Average</b>	<b>71.9%</b>	<b>% Annually</b>	<b>70.7%</b>	<b>Average</b>	<b>76.6%</b>	<b>% Annually</b>	<b>81.8%</b>
<b>66</b> Number of Rollover Incidents in 2008 (on or off road)	<b>Average</b>	<b>0.3</b>	<b>per 100 mixers</b>		<b>Average</b>	<b>0.7</b>	<b>per 100 mixers</b>	
<b>67</b> Number of Truck Mixer Backing Accidents in 2008	<b>Average</b>	<b>4.4</b>	<b>per 100 mixers</b>		<b>Average</b>	<b>2.8</b>	<b>per 100 mixers</b>	
<b>68</b> Does Fleet include any Volumetric Mixers?		<b>0%</b>	<b>Yes</b>			<b>0%</b>	<b>Yes</b>	
<b>69</b> If Yes, How Many Volumetric Mixers?	<b>Total #</b>	<b>0</b>	<b># Volumetrics</b>		<b>Total #</b>	<b>0</b>	<b># Volumetrics</b>	
<b>70</b> If Yes, how Many cu. yd. per Volumetric Mixer per Year	<b>Average</b>	<b>0</b>	<b>Yd<sup>3</sup>/Year</b>		<b>Average</b>	<b>0</b>	<b>Yd<sup>3</sup>/Year</b>	

## Appendix II Regional Data, cont'd.

### Region



#### Mixer Fleet

- 1 Total # of Truck Mixers
- 2 Average Fleet Age

#### Breakdown of Truck Mixers by Type

- 3 # Front Discharge Units
- 4 # Rear Discharge Units
- 5 # All-Wheel Drive Trucks
- 6 # Mixers Equipped w/ Belt Conveyors
- 7 # Trailer Mixers

#### Breakdown of Truck Mixers by Chassis Configuration :

- 8 2 Axles
- 9 3 Axles
- 10 4 Axles (booster)
- 11 4 Axles (pusher)
- 12 5 Axles
- 13 6 Axles
- 14 7 Axles

#### Miscellaneous Fleet Performance Information

- 15 Truck Mixer-to-Mechanic Ratio
- 16 Average Annual Mileage per Truck Mixer
- 17 Average Annual Engine Hours per Truck Mixer
- 18 Avg. Haul Distance (miles, one way)
- 19 Average Load Size (Yards<sup>3</sup>)
- 20 Typical Full Load Size (Yards<sup>3</sup>)

### 2010 N Central & Rocky Mts. Region Results

		Region	
Total #	0	Eastern	
Total #	0	Southeastern	
Total #	0	G.Lakes/ Midwest	
Total #	0	Pacific NW & W	
Total #	4	North Central	
Total #	5	Rocky Mountain	
Total #	0	Pacific Northwest	
Total #	0	Pacific Southwest	
			Median
Total #	2,067	Truck Mixers	2,067
Reg. Average	6.4	Years	5.5
			% of total
Total #	486	Fronts	23.5%
Total #	1,581	Rears	76.5%
Total #	469	All-Wheel Drive	22.7%
Total #	5	w/Conveyors	0.2%
Total #	2	Trailer Mixers	0.1%
			% of total
Total #	0	2 Axles	0.00%
Total #	0	3 Axles	6.8%
Total #	6	4 Axles (booster)	12.1%
Total #	0	4 Axles (pusher)	0.8%
Total #	0	5 Axles	25.6%
Total #	0	6 Axles	41.1%
Total #	0	7 Axles	13.6%
			Median
Average	12.5	Mixers/Mech.	12.35
Average	13252.3	Miles	12,733
Average	1422.5	Eng. Hours	1,321
Average	12.5	Haul Distance	14.14
Average	7.9	Yd <sup>3</sup>	7.8
Average	10.2	Yd <sup>3</sup>	10

### 2010 Pacific NW & SW Region Results

		Region	
Total #	0	Eastern	
Total #	0	Southeastern	
Total #	0	G.Lakes/ Midwest	
Total #	0	Pacific NW & W	
Total #	0	North Central	
Total #	0	Rocky Mountain	
Total #	3	Pacific Northwest	
Total #	11	Pacific Southwest	
			Median
Total #	2,150	Truck Mixers	2,150
Reg. Average	7.2	Years	7.8
			% of total
Total #	14	Fronts	0.7%
Total #	2,136	Rears	99.3%
Total #	0	All-Wheel Drive	59.3%
Total #	0	w/Conveyors	0.0%
Total #	241	Trailer Mixers	11.2%
			% of total
Total #	0	2 Axles	0.00%
Total #	0	3 Axles	0.2%
Total #	7	4 Axles (booster)	59.3%
Total #	1	4 Axles (pusher)	0.0%
Total #	0	5 Axles	20.2%
Total #	0	6 Axles	17.5%
Total #	0	7 Axles	0.0%
			Median
Average	10.9	Mixers/Mech.	10.6
Average	14907.4	Miles	14,000
Average	1359.8	Eng. Hours	1,163
Average	10.9	Haul Distance	14
Average	8.3	Yd <sup>3</sup>	2.35
Average	10.1	Yd <sup>3</sup>	0.77

## Appendix II Regional Data, cont'd.

### Truck Mixer Diesel Fuel Consumption

- 21 Miles per Gallon
- 22 Gallons per Engine Hour
- 23 Gallons per Cubic Yard
- 24 Fuel Costs per Cubic Yard

### Truck Mixer Maintenance Costs

- 25 Parts Expense per Cubic Yard
- 26 Shop Expense per Cubic Yard
- 27 Outside Repair Costs per Cubic Yard
- 28 Radio Expense
- 29 Tire Expenses per Cubic Yard
- 30 *Maintenance Cost TOTAL (from questions 25-29)*
- 31 Wrecker Costs (per Cubic Yard)  
or (\$/Engine Hour)
- 32 Accident Repairs (per Cubic Yard)  
or (\$/Engine Hour)
- 33 Truck Wash Cleaning Products Costs (per Cubic Yard)  
or (\$-per-Vehicle-per-Year)

### Tire-Related Information

- 34 Do You Use Retreads on Steer Tires?
- 35 ...if yes, maximum # of recaps per casing
- 36 Do You Use Retreads on Drive Tires & Lifiable Axles?
- 37 ...if yes, maximum # of recaps per casing
- 38 Do you Capitalize the Cost of Tires on New Mixers?
- 39 Typical # of Road Calls per Month due to Tire Problems?
- 40 Typical Time Lost per Tire-related Road Call? (Hours)
- 41 Avg. Cost of Tire-related Breakdown (*Not incl. Tire Cost*)?
- 42 How often is tire pressure checked?
- 43 Who checks tire pressure?

<b>2010 N Central/Rocky Mts Region</b>			<b>Median</b>
<b>Average</b>	3.13	miles/gal	\$ 3.08
<b>Average</b>	3.44	Gal/Eng hr.	\$ 3.60
<b>Average</b>	1.07	Gals/Yd <sup>3</sup>	\$ 1.07
<b>Average</b>	\$2.75	\$/Yd <sup>3</sup>	\$ 2.87
<b>Average</b>			
<b>Average</b>	\$1.03	\$/Yd <sup>3</sup>	\$ 0.87
<b>Average</b>	\$1.87	\$/Yd <sup>3</sup>	\$ 1.82
<b>Average</b>	\$2.20	\$/Yd <sup>3</sup>	\$ 0.61
<b>Average</b>	\$0.05	\$/Yd <sup>3</sup>	\$ 0.04
<b>Average</b>	\$0.34	\$/Yd <sup>3</sup>	\$ 0.34
<b>Average</b>	\$4.68	\$/Yd <sup>3</sup>	\$ 3.56
<b>Average</b>	\$0.02	\$/Yd <sup>3</sup>	\$ 0.02
<b>Average</b>	\$0.10	\$/Engine Hour	\$ 0.10
<b>Average</b>	\$0.05	\$/Yd <sup>3</sup>	\$ 0.06
<b>Average</b>	\$0.19	\$/Engine Hour	\$ 0.19
<b>Average</b>	\$0.14	\$/Yd <sup>3</sup>	\$ 0.12
<b>Average</b>	\$642.70	\$/Truck/Year	\$ 350.00
<b>Average</b>			
	0%	Yes	
	0.0	recaps/casing	0.0
<b>Data not available</b>			
	-	recaps/casing	-
	56%	Yes	
	5.1	per 100 mixers	
	1.6	Hours Lost	1.5
	\$189.69	\$/breakdown	175.0
<b>9 responses: Totals &amp; Percentages</b>			
<b>Daily</b>	2	22%	
<b>Weekly</b>	4	44%	
<b>Bi-weekly</b>	0	0%	
<b>Monthly</b>	3	33%	
<b>9 responses: Totals &amp; Percentages</b>			
<b>Driver</b>	4	44%	
<b>Mechanic</b>	3	33%	
<b>Tire Service</b>	2	22%	

<b>2010 Pacific NW &amp; SW Region</b>			<b>Median</b>
<b>Average</b>	3.94	miles/gal	\$ 3.63
<b>Average</b>	2.73	Gal/Eng hr.	\$ 2.78
<b>Average</b>	0.93	Gals/Yd <sup>3</sup>	\$ 0.98
<b>Average</b>	\$2.36	\$/Yd <sup>3</sup>	\$ 2.35
<b>Average</b>			
<b>Average</b>	\$0.84	\$/Yd <sup>3</sup>	\$ 0.77
<b>Average</b>	\$2.08	\$/Yd <sup>3</sup>	\$ 2.02
<b>Average</b>	\$0.37	\$/Yd <sup>3</sup>	\$ 0.27
<b>Average</b>	\$0.15	\$/Yd <sup>3</sup>	\$ 0.11
<b>Average</b>	\$0.30	\$/Yd <sup>3</sup>	\$ 0.30
<b>Average</b>	\$3.24	\$/Yd <sup>3</sup>	\$ 3.18
<b>Average</b>	\$0.02	\$/Yd <sup>3</sup>	\$ 0.01
<b>Average</b>	\$0.04	\$/Engine Hour	\$ 0.04
<b>Average</b>	\$0.07	\$/Yd <sup>3</sup>	\$ 0.05
<b>Average</b>	\$0.41	\$/Engine Hour	\$ 0.28
<b>Average</b>	\$0.29	\$/Yd <sup>3</sup>	\$ 0.05
<b>Average</b>	\$110.68	\$/Truck/Year	\$ 110.68
<b>Average</b>			
	7%	Yes	
	0.0	recaps/casing	0.0
<b>Data not available</b>			
	-	recaps/casing	-
	36%	Yes	
	5.0	per 100 mixers	
	2.4	Hours Lost	1.5
	\$116.00	\$/breakdown	102.5
<b>14 responses: Totals &amp; Percentages</b>			
<b>Daily</b>	1	7%	
<b>Weekly</b>	6	43%	
<b>Bi-weekly</b>	3	21%	
<b>Monthly</b>	4	29%	
<b>14 responses: Totals &amp; Percentages</b>			
<b>Driver</b>	2	14%	
<b>Mechanic</b>	6	43%	
<b>Tire Service</b>	6	43%	

## Appendix II Regional Data, cont'd.

Crankcase Drain Interval (truck mixer engine)

44 Basis of PM Interval

2010 N Central/Rocky Mts Region			Median
<b>9 responses: Totals &amp; Percentages</b>			
Mileage	1	11%	
Engine Hours	7	78%	
Calendar Days	1	11%	
Fuel Consumption	0	0%	
Oil Analysis	0	0%	

Mixer Drums, Drum Chipping, Service Life, Etc.

45 Who Performs Drum Chipping?

9 responses: Totals & Percentages			
Driver	2	22%	
Mechanic/Other	0	0%	
Outside Service	7	78%	
Average	6.8	months	5.0
Average	\$122.67	\$/per cleaning	\$ 105.00
Average	\$262.40	\$/truck per yr.	\$ 271.00

46 How Often are Drums Chipped Out? (Average, in months)

47 Average Drum Chipping Cost (per cleaning)

or per Truck Mixer-per-Year

48 Do you Capitalize the Cost of Replacement Drums?

49 Average Drum Service Life: (Years + 10ths, e.g., 8.5)

Average Drum Service Life: (Cubic Yards)

Data not available			
Average	6.3	Years	6
Average	38,357	Yd <sup>3</sup>	35,000

Front End Loaders

50 Total # of Front-end Loaders

51 Average Loader Age (Years)

52 Do you Capitalize Loader Engine Rebuilds/Overhauls?

Front End Loader Maintenance Costs

53 Parts Expense (per Cubic Yard)

or (\$/Engine Hour)

54 Shop Expense (per Cubic Yard)

or (\$/Engine Hour)

55 Outside Repair Costs (per Cubic Yard)

or (\$/Engine Hour)

56 Tire Expense (per Cubic Yard)

or (\$/Engine Hour)

57 TOTAL - per Cubic Yard (from questions 53 - 56)

TOTAL - per Engine Hour (from questions 53 - 56)

Total #	157	# Loaders	
Average	11.1	Years	10.5
	50%	Yes	
Average	\$0.11	\$/Yd <sup>3</sup>	\$ 0.11
Average	\$0.00	\$/Eng. Hr.	\$ -
Average	\$5.44	\$/Yd <sup>3</sup>	\$ 3.88
Average	\$0.12	\$/Eng. Hr.	\$ 0.10
Average	\$3.29	\$/Yd <sup>3</sup>	\$ 3.87
Average	\$0.11	\$/Eng. Hr.	\$ 0.11
Average	\$2.70	\$/Yd <sup>3</sup>	\$ 3.01
Average	\$0.06	\$/Eng. Hr.	\$ 0.07
Average	\$1.86	\$/Yd <sup>3</sup>	\$ 1.81
Average	\$0.32	\$/Eng. Hr.	\$ 0.30

Loader Diesel Fuel Consumption

58 Gallons per Engine hour

59 Gallons per Cubic Yard

60 Loader Fuel Costs per Cubic Yard

Average	3.98	Gal/Eng Hr.	
Average	0.00	Gals/Yd <sup>3</sup>	
Average	\$0.25	\$/Yd <sup>3</sup>	

2010 Pacific NW & SW Region

Median

14 responses: Totals & Percentages			
Mileage	1	0%	
Engine Hours	13	93%	
Calendar Days	0	0%	
Fuel Consumption	0	0%	
Oil Analysis	0	0%	

14 responses: Totals & Percentages

Driver	0	0%	
Mechanic/Other	1	7%	
Outside Service	13	93%	
Average	6.0	months	4.3
Average	\$276.75	\$/per cleaning	\$ 187.50
Average	\$357.11	\$/truck per yr.	\$ 306.50

Data not available			
Average	6.0	Years	5
Average	43,070	Yd <sup>3</sup>	35,000

Total #	167	# Loaders	
Average	11.0	Years	9.8
	54%	Yes	

Average	\$0.07	\$/Yd <sup>3</sup>	\$ 0.06
Average	\$0.00	\$/Eng. Hr.	\$ -
Average	\$8.96	\$/Yd <sup>3</sup>	\$ 5.96
Average	\$0.45	\$/Eng. Hr.	\$ 0.09
Average	\$6.06	\$/Yd <sup>3</sup>	\$ 5.90
Average	\$0.12	\$/Eng. Hr.	\$ 0.09
Average	\$6.94	\$/Yd <sup>3</sup>	\$ 5.96
Average	\$0.04	\$/Eng. Hr.	\$ 0.02
Average	\$0.24	\$/Yd <sup>3</sup>	\$ 0.24
Average	\$0.56	\$/Eng. Hr.	\$ 0.15

Average	3.56	Gal/Eng Hr.	
Average	0.00	Gals/Yd <sup>3</sup>	
Average	\$0.20	\$/Yd <sup>3</sup>	

## Appendix II Regional Data, cont'd.

### Additional Benchmarking Items

- 61** Driver Availability % (Available Drivers/Total Drivers)
- 62** Fleet Availability % (Available Mixers / Total Mixers)
- 63** Fleet Utilization % (Available Drivers/ Available Mixers)
- 64** Cubic Yards Delivered per Truck Mixer
- 65** Dispatch Efficiency (Drivers Hr. - Standby Hr./Drivers Hr.)
- 66** Number of Rollover Incidents in 2008 (on or off road)
- 67** Number of Truck Mixer Backing Accidents in 2008
- 68** Does Fleet include any Volumetric Mixers?
- 69** If Yes, How Many Volumetric Mixers?
- 70** If Yes, how Many cu. yd. per Volumetric Mixer per Year

<b>2010 N Central/Rocky Mts Region</b>			<b>Median</b>
<b>Average</b>	<b>88.4%</b>	<b>% Annually</b>	<b>90.0%</b>
<b>Average</b>	<b>94.1%</b>	<b>% Annually</b>	<b>95.0%</b>
<b>Average</b>	<b>86.3%</b>	<b>% Annually</b>	<b>85.0%</b>
<b>Average</b>	<b>4,005</b>	<b>Yd<sup>3</sup>/Truck/Year</b>	<b>4,416</b>
<b>Average</b>	<b>78.5%</b>	<b>% Annually</b>	<b>80.0%</b>
<b>Average</b>	<b>0.3</b>	<b>per 100 mixers</b>	
<b>Average</b>	<b>3.5</b>	<b>per 100 mixers</b>	
	<b>0%</b>	<b>Yes</b>	
<b>Total #</b>	<b>0</b>	<b># Volumetrics</b>	
<b>Average</b>	<b>0</b>	<b>Yd<sup>3</sup>/Year</b>	

<b>2010 Pacific NW &amp; SW Region</b>			<b>Median</b>
<b>Average</b>	<b>92.3%</b>	<b>% Annually</b>	<b>94.0%</b>
<b>Average</b>	<b>93.8%</b>	<b>% Annually</b>	<b>95.0%</b>
<b>Average</b>	<b>84.7%</b>	<b>% Annually</b>	<b>87.0%</b>
<b>Average</b>	<b>4,285</b>	<b>Yd<sup>3</sup>/Truck/Year</b>	<b>4,371</b>
<b>Average</b>	<b>81.6%</b>	<b>% Annually</b>	<b>80.0%</b>
<b>Average</b>	<b>0.1</b>	<b>per 100 mixers</b>	
<b>Average</b>	<b>2.5</b>	<b>per 100 mixers</b>	
	<b>0%</b>	<b>Yes</b>	
<b>Total #</b>	<b>0</b>	<b># Volumetrics</b>	
<b>Average</b>	<b>0</b>	<b>Yd<sup>3</sup>/Year</b>	

## Appendix III 2010 Fleet Survey Electronic Submission Form

### 2010 NRMCA FLEET MAINTENANCE BENCHMARKING AND COST SURVEY Electronic Version

**Fleet Supervisors:** Fill out this survey (**NOTE: type data only in yellow-highlighted cells or use provided drop-down boxes**) as accurately and completely as possible. E-mail form to NRMCA's Operations Department by **April 1, 2010**. If applicable, you may either compile data from all the plants within a state or region (see map in question #1) or submit a separate survey from each division or business unit. If you cannot answer all the questions, please complete and submit what you can.

**Please use data from calendar year 2009.**

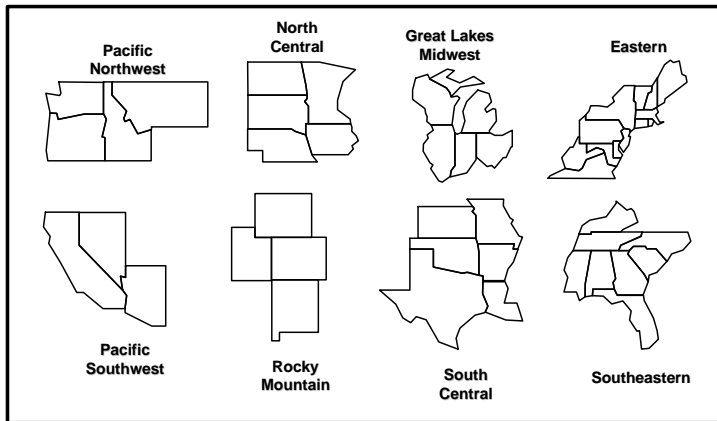
The data gathered via this survey will be presented in an executive summary report in NRMCA's Infocus Quarterly Magazine. Persons completing the survey will receive an electronic copy of the report.

**Instructions:** All cells on this sheet are protected, except for the yellow-highlighted data entry cells. Please tab from line to line to enter data in the highlighted cells. Where provided, use drop-down boxes instead of typing data into yellow cells. When completed, please save file as **<your company name>.xls** and email to **gmullings@nrmca.org**

All proprietary company information shall remain confidential.

#### Region

In which region are you located? (If deliveries cross regional boundaries, select the highest volume region, or fill out a separate survey form for each region)




**Mixer Fleet** This section pertains to truck mixers ONLY. (Try to isolate mixer costs from the other equipment in fleet.)

- 1 Total # of Truck Mixers >>>>>
- 2 Average Age (years + 10ths, e.g., 8.5) >>>>>

	Truck Mixers
	Years

**Breakdown of Truck Mixer Fleet by Type** (Note: Answer #1 total should equal sum of #8-#14)

- 3 # Front Discharge Units >>>>>
- 4 # Rear Discharge Units >>>>>
- 5 # All-Wheel Drive Trucks >>>>>
- 6 # Mixers Equipped w/ Belt Conveyors >>>>>
- 7 # Trailer Mixers >>>>>

	Fronts
	Rears
	All-Wheel Drive
	w/Conveyors
	Trailer Mixers

**Chassis Configuration** : # of (straight truck) mixers with:

- 8 2 Axles >>>>>
- 9 3 Axles >>>>>
- 10 4 Axles (booster or tag) >>>>>
- 11 4 Axles (pusher) >>>>>
- 12 5 Axles >>>>>
- 13 6 Axles >>>>>
- 14 7 Axles >>>>>

	2 Axles
	3 Axles
	4 Axles (booster)
	4 Axles (pusher)
	5 Axles
	6 Axles
	7 Axles

### Appendix III 2010 Fleet Survey Electronic Submission Form, cont'd

Miscellaneous Fleet Performance Information

15	Truck Mixer-to-Mechanic Ratio (e.g., 13.5 <i>trucks per mechanic</i> ) >>>>>		Mixers/Mech.
16	Average Annual Mileage per Truck Mixer >>>>>		Miles
17	Average Annual Engine Hours per Truck Mixer >>>>>		Hours
18	Avg. Haul Distance ( <i>miles, one way</i> ) >>>>>		miles
19	Average Load Size (Yards <sup>3</sup> ) >>>>>		Yd <sup>3</sup>
20	Typical <u>Full</u> Load Size (Yards <sup>3</sup> ) >>>>>		Yd <sup>3</sup>

Diesel Fuel Consumption

21	Miles per Gallon >>>>>		miles/gal
22	Gallons per Engine Hour >>>>>		Gal/Eng hr.
23	Gallons per Cubic Yard >>>>>		Gals/Yd <sup>3</sup>
24	Fuel Costs per Cubic Yard >>>>>		\$/Yd <sup>3</sup>

Truck Mixer Maintenance Costs

25	Parts Expense per Cubic Yard >>>>> <i>(parts purchased solely for the repair of mixer chassis, body and drum assemblies)</i>		\$/Yd <sup>3</sup>
26	Shop Expense per Cubic Yard >>>>>		\$/Yd <sup>3</sup>
27	Outside Repair Costs per Cubic Yard >>>>> <i>(parts and labor for repairs to truck mixers performed by an outside party)</i>		\$/Yd <sup>3</sup>
28	Radio Expense >>>>>		\$/Yd <sup>3</sup>
29	Tire Expenses per Cubic Yard >>>>> <i>(Includes new, used and recapped tires plus repairs, mounting, balancing and other related costs)</i>		\$/Yd <sup>3</sup>
30	<b>TOTAL (from questions 25-29)</b> >>>>>	\$ -	\$/Yd <sup>3</sup>
31	Wrecker Costs (per Cubic Yard) >>>>>		\$/Yd <sup>3</sup>
	or (\$/Engine Hour) >>>>>		\$/Engine Hour
32	Accident Repairs (per Cubic Yard) >>>>>		\$/Yd <sup>3</sup>
	or (\$/Engine Hour) >>>>>		\$/Engine Hour
33	Truck Wash Cleaning Chemicals & Detergents (per Cubic Yard) >>>>>		\$/Yd <sup>3</sup>
	or (\$-per-Vehicle-per-Year) >>>>>		\$/Truck/Year

Tire-Related Information

34	Use Retreads on Steer Tires? (Yes or No) >>>>>	<input type="checkbox"/>	
35	...if yes, maximum # of recaps per casing >>>>>		recaps/tire
36	Use Retreads on Drive Tires & Lifiable Axles? (Yes or No) >>>>>	<input type="checkbox"/>	
37	...if yes, maximum # of recaps per casing >>>>>		recaps/tire
38	Do you Capitalize the Cost of Tires on New Mixers? (Yes or No) >>>>>	<input type="checkbox"/>	
39	Typical Number of Road Calls per Month Due to Tire Problems >>>>>		
40	Typical Time Lost per Tire-related Road Call? (Hours + 10ths) >>>>>		Hours
41	Typical Cost of a Tire-related Breakdown ( <i>Not Including Tire Cost</i> )? >>>>>		\$/breakdown
42	How often is tire pressure checked? >>>>>		<input type="checkbox"/>
43	Who checks tire pressure? (Driver, Mechanic or Tire Service) >>>>>		<input type="checkbox"/>

### Appendix III 2010 Fleet Survey Electronic Submission Form, cont'd

Crank case Drain Interval (truck engine)

44 Basis of Interval (e.g., mileage, engine hours, calendar days, fuel use, oil analysis) >>>>>>

Mixer Drums, Drum Chipping, Service Life, Etc.

45 Who Performs Drum Chipping? >>>>>>

46 How Often are Drums Chipped/Cleaned, on Average? (Months) >>>>>> 

	months
--	--------

47 Average Drum Chipping Cost (per cleaning) >>>>>> 

	\$/per cleaning
--	-----------------

or per Truck Mixer-per-Year >>>>>> 

	\$/truck per year
--	-------------------

48 Do you Capitalize the Cost of Replacement Drums? (Yes or No) >>>>>>

49 Average Drum Service Life: (Years + 10ths, e.g., 8.5) >>>>>> 

	Years
--	-------

Average Drum Service Life: (Cubic Yards) >>>>>> 

	Yd <sup>3</sup>
--	-----------------

Front End Loaders

*(Information in this section pertains to front-end loaders only. Try to isolate loader costs, from the other equipment in fleet)*

50 Total # of Front-end Loaders >>>>>> 

	# Loaders
--	-----------

51 Average Loader Age (Years) >>>>>> 

	Years
--	-------

52 Do you Capitalize Loader Engine Rebuilds/Overhauls? (Yes or No) >>>>>>

Front End Loader Maintenance Costs

53 Parts Expense (per Cubic Yard) >>>>>> 

	\$/Yd <sup>3</sup>
--	--------------------

or (\$/Engine Hour) >>>>>> 

	\$/Eng. Hr.
--	-------------

*(Front-end Loader parts ONLY)*

54 Shop Expense (per Cubic Yard) >>>>>> 

	\$/Yd <sup>3</sup>
--	--------------------

or (\$/Engine Hour) >>>>>> 

	\$/Eng. Hr.
--	-------------

*(All Costs Charged to Loader, including Internal Labor)*

55 Outside Repair Costs (per Cubic Yard) >>>>>> 

	\$/Yd <sup>3</sup>
--	--------------------

or (\$/Engine Hour) >>>>>> 

	\$/Eng. Hr.
--	-------------

*(Parts & Labor for Repairs Performed by Outside Party)*

56 Tire Expense (per Cubic Yard) >>>>>> 

	\$/Yd <sup>3</sup>
--	--------------------

or (\$/Engine Hour) >>>>>> 

	\$/Eng. Hr.
--	-------------

*(Includes Tires + Repairs, Mounting, and Related Costs)*

57 TOTAL - per Cubic Yard (from questions 53 - 56) >>>>>> 

\$ -	\$/Yd <sup>3</sup>
------	--------------------

TOTAL - per Engine Hour (from questions 53 - 56) >>>>>> 

\$ -	\$/Eng. Hr.
------	-------------

Loader Diesel Fuel Consumption

58 Gallons per Engine hour >>>>>> 

	Gal/Eng Hr.
--	-------------

59 Gallons per Cubic Yard >>>>>> 

	Gals/Yd <sup>3</sup>
--	----------------------

60 Loader Fuel Costs per Cubic Yard >>>>>> 

	\$/Yd <sup>3</sup>
--	--------------------

### Appendix III 2010 Fleet Survey Electronic Submission Form, cont'd

Additional Benchmarking Items

61	Driver Availability % (Available Drivers/Total Drivers)	>>>>>		% Annually
62	Fleet Availability % (Available Mixers / Total Mixers)	>>>>>		% Annually
63	Fleet Utilization % (Available Drivers/ Available Mixers)	>>>>>		% Annually
64	Cubic Yards Delivered per Truck Mixer	>>>>>		Yd <sup>3</sup> /Year
65	Dispatch Efficiency <i>(Drivers Hours Worked - Standby Hours/Drivers Hours Worked)</i>	>>>>>		Disp. Eff %
66	Number of Rollover Incidents in 2009 (on or off road)	>>>>>		# Rollovers
67	Number of Truck Mixer Backing Accidents in 2009	>>>>>		# Back. Acc.
68	Does Fleet include any Volumetric Mixers?	>>>>>	<input type="button" value="▼"/>	
69	If Yes, How Many?	>>>>>		# Volumetrics
70	If Yes, how Many Cubic Yards per Volumetric Mixer per Year	>>>>>		Yd <sup>3</sup> /Year

Submitted by:

First Name	
Last Name	
Title:	
Company:	
Address:	
City	
State	
Zip	
Phone:	
Fax	
e-mail address:	

Please e-mail completed form to NRMCA's Operations Staff by April 1, 2010 to: [gmullings@nrmca.org](mailto:gmullings@nrmca.org)