A Comprehensive Approach to Cycle Time Components

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BC Forest Safety Council

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Today’s reality is that these methods do not fully recognize the time necessary to safely complete a hauling cycle, recognize the support systems and infrastructure or incorporate the cumulative effects of the current and historic cycles of mining, logging, and road construction.

A NEW APPROACH

Operational variations exist, but most log hauling in BC takes place according to largely standardized processes, allowing the identification of the components of log hauling to be fairly straightforward. How much time, on average, it takes to travel from Point A to Point B (often broken down into a series of several sector times) and back again, and completing all associated activities (wrapping, unloading, etc.) can be estimated, calculated, and/or measured. Adding the time allocated to each sector and activity should yield a reliable cycle time.

 Aviation and other business enterprises face to face with negotiated contract prices that minimize delivered log costs. How long is it to deliver the cycles of work that are required to achieve the desired contract price? Can the contract cycle time be broken down into its component parts? How many activities are involved? How much time is required for each activity?

The approach methodology and not in cycle time calculations, the appraisal methodology, typically includes in cycle time calculations that are not being included in the IAM. Some log haulers interviewed in the Cycle Time Study surveys indicated that their cycle times did not include the time required for pre-trip inspections, and survey respondents said their cycle times do not include truck load binders.

The IAM definition indicates that pre-trip inspections and surveys are required to ensure that the load is safe to transport. However, the pre-trip inspection is not always included in cycle time calculations.

Similarly, most haulers interviewed in the IAM surveys indicated that their cycle times do not include the time required for minor repairs made by drivers, checking and adjusting brakes, or refueling. Yet, drivers often reported that the time required for these activities can be significant, especially during adverse weather conditions.

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Operational realties.

Included or excluded in the IAM manual, and in practical cycle time calculations, seem inconsistent with seasonal weather conditions—continue to be vital to industry and justifiable considerations of the parameters and adjustments in IAM—disclose real and constructive positions. Some of the parameters and adjustments are based on the and applying the acceptance methodology to determine the time allocated to each element. Where several of the elements that IAM indicates could or should be considered in determining cycle times are not being included in cycle time calculations, some log haulers interviewed in the Cycle Time Study surveys indicated that their cycle times do not include the time required for pre-trip inspections.

A NEW APPROACH exists, but log hauling in BC takes place according to fairly standardized processes,
there is risk that such shortcomings tend to under-estimate log hauling costs, and that those costs are passed on to log haulers by an inadequate cycle time. Recognizing there are differences between the standard practices of today and the methodologies and terminologies described in the IAM process, the Cycle Time survey process sought to obtain current and relevant information from Licensees, contractors, drivers and others. Such information can then be used to develop an updated list of what activities are, or legitimately ought to be, included in a cycle time. Based on survey responses and a little re-thinking of appraisal methodologies in the current regulatory context, the goal of this document is to offer an updated and inclusive description of cycle time components that should be considered in determining cycle times.

The following activities will influence travel speed, including clearing loaded traffic consistent with road use conditions (e.g., weather, time of day, configuration) and should include average loading time, real-time measurements should be conducted during a representative range of removed and ends where the second and middle load is ready for transport. To determine a fair loading phase begins when the empty log truck is under the loader ready for the trailer to be removed.

B. Empty travel time

Empty travel time includes the time it takes for an empty log truck to travel from the off-loading or log delivery location to loading site on the harvest block (i.e., "under the loader", but the trailer, if there is one, is still on the truck). The distance of each sector is accurately measured and recorded (often to the nearest 0.1 km). The distance from the edge of one sector to the end of the next sector is measured as accurately as possible, using travel speeds and conditions that will influence travel speed, including clearing loaded traffic consistent with road use conditions (e.g., weather, time of day, configuration). The distance from the edge of one sector to the end of the next sector is measured as accurately as possible, using travel speeds and road conditions that will influence travel speed. Empty travel time should be measured in real time or calculated using travel speeds and conditions that will influence travel speed.

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1. Off-loading the trailer and preparing the rigging: hooking up hitch(es), connecting air lines and electrical and scale cords, calibrating scales, setting up stakes, conducting a tug test, double checking gear, etc. and ensuring the unit is ready to accept the load.

2. The loader placing and arranging logs in the bunks.

3. Positioning and re-positioning the truck to facilitate loading (e.g. move ahead to next log deck).

4. The loader adjusting the load to ensure proper crown, correct axle weights, length / height, weight distribution, etc., and ensuring the unit is ready to accept the load.

5. Completing or receiving the load slip (paper or electronic entry device).

6. Securing the load: the loader restraining the bundle(s) to permit driver to inspect the load, apply and secure all wrappers and other activities listed below. Whenever weigh scales are used at the delivery location, loaded travel time includes the time up to when the weigh scales are used.

D. Unloading Time

1. Unloading time

For off-loading, when the loaded truck pulls into the off-loading site, the driver has not yet initiated preparations for the unloading process into the weigh scales. Where weigh scales are not used, loaded travel time ends when the load is completely off-loaded.

The unloading phase begins once the loaded truck pulls onto the weigh scales or into the off-loading site.
several survey respondents indicated they determine unloading time by calculating the period between the recorded “weigh in” time and the recorded “weigh out” time, averaging a number of such recordings over a period. Several survey respondents indicated they determine unloading time by calculating the period between the recorded “weigh in” time and the recorded “weigh out” time, averaging a number of such recordings over a period.

Weighing in (if a weigh scale site is used at the off-loading site).

Affixing bands or cables around the load (if applied).

Travelling in and about the off-loading area (e.g. as directed to a specific off-loading site).

Waiting time once in the owner’s site.

Removing, recoiling and storing wrappers (as per regulation and site owner direction). Depending on the method used, this includes time at the wrapper removal station or having the load secured by the off-loading machine, and then removing and storing the wrappers.

Preparing the unit for return travel to the loading site, including but not limited to lowering stakes, checking all rigging for structural integrity, sweeping rocks or woody debris from the rigging, checking tires, disconnecting and reloading the trailer, and travel to the weigh scale.

Weighing out (if a weigh scale site is used at the off-loading site).

E. Unavoidable Delay Time

I. Actions Necessary to Satisfy Legal Requirements

Statutes and regulations (e.g. Motor Vehicle Act and related Regulations, WorkSafeBC Regulations, Timber Marking and Transportation Regulation, etc.) require that log truck drivers perform several important steps to confirm their truck and load are prepared for transportation. What drivers must actually do, and how long it takes to complete those steps, varies by application (e.g. off-highway versus on-highway). Brake checks take longer for 8-axle configurations than 5-axles. Some loads settle more than others, and require more frequent wrapper checks. Seasonal or weather-related factors also impact time and efforts involved. Survey respondents suggested contractors and drivers should recognize and evaluate the following.

These are legal requirements deemed integral to successful log hauling operations, yet are often overlooked when calculating cycle times. Additional time and effort to complete necessity activities result in unavoidable delays.

Drivers should recognize and evaluate the following.

1. Load marking - painting and/or hammer marking and any additional marking requirements specified by the log purchaser.

2. Wrapper check stops – WorkSafeBC Regulations require that load binders “must be checked and approved”, and that the load is “properly secured by the off-loading machine”. The frequency and duration of stops to confirm load securement varies according to several factors (e.g. how tightly the load was loaded, timber type, etc.).

3. Removing, recoiling and storing wrappers (as per regulation and site owner direction).

4. Waiting time once in the owner’s site.

5. Traveling in and about the off-loading area (e.g. as directed to a specific off-loading site).

6. Preparing the unit for return travel to the loading site, including but not limited to lowering stakes, sweeping rocks or woody debris from the rigging, checking all rigging for structural integrity, and checking tires.

7. Weighing out (if a weigh scale site is used at the off-loading site).

Check time, disconnection and re-connection of the trailer, and travel to the weigh scale.

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3. Installing and checking a flag or log light; may not be necessary for all loads/configurations.

4. Replacing lights, etc.

3. Minor repairs – Exchanging an airline, tightening a parking brake, having a tire repaired/replaced, etc.

2. Scheduled maintenance and servicing – Typically considered a pre-condition of contractual operations.

1. Installing fuel storage tanks on the empty truck to the loading location and/or providing break assistance (e.g., "snubbing.")

4. Assistance on steep grades – Winching or otherwise pulling the empty truck up to the loading area.

3. Engage.

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Actions Necessary to Satisfy Practical Requirements

While not legally mandated, log truck drivers must complete several tasks and actions in order for log hauling to occur. Most are standard operating procedures that forest industry employers and operators require to complete their work. While not included in cycle time determinations, these actions are essential for ensuring log hauling operations run smoothly and efficiently.

1. Refueling – In many construction projects, the owner recognizes the need for fuel and refueling time as part of daily log hauling operations.

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Adding water for water-cooled brake systems (typically only for off-highway applications).

5. Coffee and meal breaks – Employment Standards Regulation Section 37.2 exempts employers from recognizing meal breaks (as well as several other practical allowances enjoyed by most other workers) for a person employed as a logging truck driver who is paid on a compensation system other than an hourly rate and who is working in the Interior area as defined in section 1(1) of BC Reg. 22/96, and Timber Harvesting Contract and Subcontract Regulations.

It seems curious that Employment Standards acknowledge that other truck drivers, including Coastal log truck drivers paid on an hourly basis, and indeed almost all other employees deserve paid meal breaks, yet the typical Interior log hauler does not. From one perspective, the rationale for this exemption is understandable – the driver is paid a percentage of truck gross revenue, and coffee time is unproductive in that it does not move the truck or load any closer to the delivery site. Some suggest that log haulers can pour their coffee when they are stopped to check their wrappers, and enjoy it with their sandwich once they resume driving. Some log haulers say they are quite adept at pouring coffee while driving. However, from a safety perspective, a Regulation and/or payment mechanism that encourages distractions while driving seems at odds with the safety interests of the driver and the motoring public. Several valid studies confirm that regular breaks to snack and hydrate help drivers manage fatigue, and provide opportunities for a stretch and a walk that contribute to overall health and wellness.

A forest industry looking to attract, retain and sustain log truck drivers might consider investing in mechanisms that encourage healthy work habits. Avoidable delays are precisely that – time incurred for delays caused by avoidable events or circumstances; ones that are somewhat predictable and therefore manageable. Most cycle time adjustments are avoidable delays:

1. Time spent waiting to weigh in or weigh out.
2. Time spent waiting to load.
3. Time spent waiting to unload.
4. Time spent waiting for other avoidable delays.

The following are examples of avoidable delays:

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4. Time spent at government scales and roadside inspections.

Strategies to manage and reduce avoidable delays will be addressed in a subsequent document, but a brief overview of a few practical methods is provided below.

I.) Minimizing time spent at the loader

- Assign each truck a loading time, with each time spaced out according to a realistic loading time. Monitor for compliance.
- If the mill yard is waiting for trucks to unload, rather than allowing T empty / T loaded.
- Assign each contractor a series of scheduled weigh-ins based on realistic loading hours.

II.) Extending scale hours

- Use average tare weights and enable unloaded trucks to sometimes bypass the weigh scales.
- If the mill yard is waiting for trucks to unload, rather than allowing T empty / T loaded.
- Assign each contractor a series of scheduled weigh-ins based on realistic loading.

III.) Minimizing time spent at government scales and roadside inspections

- Although this will remain a legal requirement, there are at least a couple of ways to manage /

Less frequently the target of CVSE, CFE and WSBC enforcement activities.}

Truckers that unloading equipment and are known to be working hard to load within

95% program can provide transponders that effectively “wave through” compliant truckers.

Revised to include the frequency with which truckers have to stop at government scales. The Weigh To

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