

**Phase Congestion Review**  
**Report of the BC Forest Safety Ombudsman**

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**Phase integration** is the practice of incorporating a number of harvesting phases (potentially multiple contractors), operating at the same time within a single cut block. It is a practice that has evolved in the logging industry over years, and is a departure from how logging worksites used to be managed.

**Phase Congestion** is where the integration or management of those phases has reached a tipping point where the overcrowding or jamming of work activities or lack of appropriate planning and/or supervision has created an unsafe work environment, putting workers at significant risk.

WorkSafeBC Regulation requires:

- that the owner of a forestry operation (most often the licensee) must ensure that all activities of the forestry operation are both planned and conducted in a manner consistent with Regulation and with safe work practices acceptable to the Board.
- every person (e.g. prime contractor, supervisor, etc.) who has knowledge and control of any particular activity in a forestry operation must ensure that the activity is both planned and conducted in a manner consistent with this Regulation and with safe work practices acceptable to the Board.

When a licensee or contractor has determined to integrate multiple phases in an industry where traditionally this has not been the case, it should not be a surprise that there are a wide range of opinions on the practice.

At the request of BC Forest Safety, the **BC Forest Safety Ombudsman** has undertaken this review in order to support industry's efforts to

advance safety outcomes relating to phase congestion. The intent of this report is to provide a brief overview of some of the factors that have led to the practice of phase integration, and outlines general observations and considerations to support industry's continued efforts to improve safety.

It should be noted that the death of a faller in 2015 has brought additional focus to the practice of phase integration. While that tragic incident is not part of this review, it does nonetheless profoundly highlight the need for a continued focus on safety in one of the most dangerous industries in the province.

### **How we got here:**

A number of factors have contributed to the evolution of a multiphase worksite in the forest industry. These factors can be grouped into two categories:

- i) Commercial Influences
- ii) External Considerations

This overview is not intended as a commentary on any specific business practices that have been made by the forest industry; business decisions are cited simply to illustrate how they have impacted logging operations.

#### Commercial Influences:

Over the past several years, the forest industry has had to continually evolve and adapt its business operations in order to remain relevant in a globally competitive marketplace. Phase integration, as a management tool, is simply the result of those adaptations, and not the result of any single, deliberate decision to move from one operating model to another.

Some of the commercial influences that have led to the evolution of phase integration are:

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- The adoption of a just-in-time delivery model where the licensee or operator has made the business decision that the increased profitability of carrying lower inventories of logs, roads, cutting permits etc. outweighs the benefit of flexibility that larger inventories provide. As part of this decision, the licensee or operator has also made the decision to accept the risk associated with operating multiple phases in a single cut block or operating area.
- The shift where individual logging operations moved from being a cost centre and fiber supplier to mills, where logging camps were year round businesses tied to lumber and pulp prices, to acting as independent businesses where the operational year was heavily influenced by fiscal consideration; log prices, profit centres, yearend inventories and other financial factors. Workplace decisions shifted from the field to the office as fiscal considerations played a greater role in how operations were run on the ground.
- The shift from large company operations with company crews to contractor crews, provided the ability for licensees to reduce costs and shift the responsibility, legal, environmental, financial and safety risks to contractors without impacting their ability to access fibre.
- The peaks and valleys of commodity cycles, softwood lumber agreements, government regulations, policy and legislation, land use decisions and labour agreements all have contributed to the industry continuing to refine their business practices to remain competitive.

External Considerations:

In addition to commercial influences, a number of external factors have contributed to the utilization of phase integration at logging worksites. Some of these factors include:

- Increased timelines related to permitting:  
As a result of competing land interests, First Nations and stakeholder consultation and other pressures on the working forest land base – there may be extended timelines and less predictability for securing approved cut blocks. The effect is to provide less options for licensees or contractors who now may have to concentrate their harvest activities in order to meet other fiber supply obligations, maximize commodity markets, adjust to weather conditions, etc. This is a complex issue and not purely a function of government, other issues come into play. The challenges differ between the process for securing permits for licensees and their application process and timelines for approval versus BCTS. BCTS from a permitting prospective is a licensee. All of the challenges experienced by other licensees in terms of delays in securing a cutting permit as a result of consultation obligations, are experienced by BCTS. For their client base who rely on BCTS for their fibre supply where timeliness and predictability are critical this creates uncertainty. For other licensees, the Province has delegated to them the responsibility to manage all First Nations and stakeholder consultation. While FLNRORD is able to provide certainty in terms of timing for the issuance of a cutting permit once an application has been received from a licensee, the same uncertainty experienced by BCTS during the actual consultation process has just been shifted to the licensees. The net effect is the same in that there is a lack of timeliness

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and predictability in securing cutting permits in many cases on the ground translates into more integrated worksites.

- **Cut Block Size:** over the past several years, the size of cut blocks have been significantly reduced, adding to the chances that multiple phases may have to operate in the same cut block at one time.
- **Seasonal conditions:** wildfire, heavy snowfalls and other weather events can have a dramatic impact on log inventories, causing mills to push for log deliveries on an accelerated basis once harvest operations are able to reconvene. This has the effect of pushing multiple phases into a single work site and could be further compounded by extended hours of operation.
- **Investment Risk:** many licensees are reluctant to invest in securing a large inventory of approved cutting permits, for fear that competing interests on the land from environmental groups, local governments, First Nations or other stakeholder groups could force amendments to a cut block approval that could devalue or possibly void the investment.
- **Technology:** Prior to the introduction of communication systems, (GPS), faller safety was reliant on a buddy system where the critical forms of communication were sound and visual verification. The practice of shutting down a saw at random intervals to listen for another faller was key, and as a result falling activities rarely if ever occurred in areas where heavy equipment was operating. The introduction of new communication systems has increased the comfort, tolerance and acceptance level of fallers to work in closer proximity to heavy

equipment and has, ironically, increased the potential for phase congestion.

- **Temporal Phase Congestion:** Although not related to harvesting, it is a form of phase congestion that can occur in the silviculture sector when industry and/or government commences the deactivation of roads, bridges and other infrastructure associated with harvesting prior to silviculture obligations being completed. The time factor contributes to adding additional risks to a sector that could have been avoided by better long term recognition and scheduling of work activities related to each phase of harvesting, which includes silviculture.

### **Observations:**

Phase Integration or multiphase worksites are not, by definition, unsafe, although that was a perspective offered by a number individuals interviewed for this report.

Indeed, there are very few situations where a multiphase workplace cannot be managed safely. The issue is; as the forest harvest sector has moved from a less complex worksite to one with a requirement for a much higher and more intense management oversight, have the management systems and human resources kept pace to be able to take on this new role? This is a critical question for an industry that is still driven by a 'can-do' culture, where success is measured almost singularly by output and productivity. Even today where we have seen a significant change in the culture of the forest sector, while still one of the most dangerous occupations in BC, it has by a significant margin the fewest reports of people refusing unsafe work.

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The level of phase integration that exists at a logging worksite varies from site to site, and can either be relatively minor (i.e. only two phases occurring at one time in a cut block) or quite significant (i.e. numerous phases occurring at once within a small, confined space).

As stated earlier phase congestion is when the integration has reached a tipping point and the worksite has become overcrowded, and the lack of appropriate planning, communication and/or supervision has created an unsafe work environment, putting workers at significant risk. In some scenarios, depending on the physical dynamics of the cut block, phase congestion can occur with as few as two phases operating in a single cut block. As one person interviewed for this report said, “It is impossible to quantify a negative,” and there are no statistics that can be used to confirm a “gut-feel” that a tipping point has been reached where the risks are unacceptable.

In 2013, the Coast Harvest Advisory Group (CHAG) undertook a review to identify the root causes of phase congestion and to determine how best to manage it. Ultimately, CHAG developed a ‘Guiding Document’ for industry on phase congestion, as well as a ‘Hazardous Assessment Form’ for supervisors to use as a supplement to existing site safety plans.

CHAG’s Guiding Document makes three primary recommendations to forestry CEOs – these are:

1. Create an industry standard that eliminates the practice of stacking.
2. Incorporate scheduling of phases into the planning/harvesting process to reduce congestion and the chance of stacking.
3. Reinforce that supervisors/workers have the authority to stop work and seek assistance if they feel congestion (or other issues) is creating a hazard or undo pressure.

Although the tools and recommendations included in the CHAG report are relevant and useful, throughout the course of interviews for this report, no one mentioned either the document or whether the Hazardous Assessment Form was being used, so it is unclear to us, the extent to which the report’s recommendations have been utilized by the industry.

The recommendations also appeared aimed at eliminating or minimizing phase congestion but from our interview the focus today appeared more directed at formalizing how to manage a congested worksite instead of how to prevent its existence in the first place.

Moreover, the recommendations seem to promote a self-regulating model of managing phase congestion.

If this is the case, additional efforts need to be focused on ensuring industry is positioned to effectively manage complex worksites and that the self-regulating model needs to be supported by industry guidelines including developing skills of supervisors to manage complex worksites. These efforts should be appropriately directed at formalizing how to manage a congested worksite instead of how to prevent its existence in the first place.

Logging Culture:

Logging is one of the most dangerous professions in BC, and this is reflected by the assessment rates that WorkSafeBC applies to the industry. Despite the dangerous nature of the industry, it is unusual for loggers to turn down work, even in situations that may be deemed ‘unsafe’ in other industries.

Despite all of the changes that have occurred over the past several years, this is still an industry that has a ‘can-do’ culture, where the first inclination is to fix any problem that might

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arise rather than to pull back and re-work plans when necessary.

The industry is also defined by its commercial relationships that can be characterized by the view that “if I don’t do it, there is someone else out there who will”.

This cultural context is important because it demonstrates that the ability to pull-back, slow down, or stop/refuse work may be challenging for many in the industry, and those qualities are vital to managing complex worksites where the tipping point into unsafe conditions is undefined.

Indeed, the most comprehensive planning processes – like the ones that were presented during discussions for this report – will not be successful if there is not a shift in the culture, and this will need to be led from the top.

This need is further evidenced by the various discussions that took place during the research for this report, many individuals expressed fear about having their comments made public for fear that there may be some type of retribution if they were. This sentiment was striking because it does not mesh with all of the efforts the industry has made over the past several years to promote an open workplace where individuals feel comfortable raising issues, and is not consistent with previous experiences on other topics. It speaks to the emotional nature of the issue of phase integration - phase congestion.

Supervisory Training:

Similar to the issue of industry culture, the current cadre of trained supervisors likely need some enhanced skills to meet the demands of supervising a complex worksite. The execution of safety plans is only as good as the people charged with the responsibility of implementation, and the skill set required for filling supervisory roles a decade ago are not

necessarily the skill sets required today, where the line between phase integration and phase congestion is uncertain.

Managing complex worksites requires a greater understanding of processes and systems than it is an understanding on how to splice a haul back. The role and skill set of supervisors must change to meet the changing environment within which they are now being asked to manage.

Contracting Models:

The shift from large company crews to a contracting model in the industry has meant that overall responsibility for harvesting operations has shifted to multiple parties, and this potentially creates a gap in the process of ensuring a consistent approach to work-plan execution.

While a licensee company operational plan would have been prescriptive in how harvesting activities would occur within a cut block, subcontracting agreements leave it up to contractors to develop their own execution plan to achieve a set of licensee objectives. There are so many variables in those contracts (financial, safety, delivery dates, back-up areas etc.), that in some cases the objectives may be in conflict with establishing a contractor’s ability to effectively manage complex worksites.

Without some ability for the responsibility for the execution plan for harvesting surviving through the contracting out process so there is a shared responsibility for the outcomes, there is always going to be a potential for an incident or accident.

The purpose of contracting should not be to shift liability when it comes to safety, but to utilize the combined expertise, experience and knowledge of all parties to improve safety outcomes.

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The requirement to designate Prime Contractors established by WorkSafeBC was intended to address some of the operational issues associated with having multiple contractors on site at one time. However, the reality is that in some cases, depending on how the worksite is set up, the Prime designation has had the opposite effect.

Unlike in the construction trades where a single major is usually the Prime and all sub-trades work directly for that Prime who has full control and authority over scheduling of activities, that is not always the case in the forest industry. In forest operations, in some cases, there may be more than one Prime in a single cut block. At other times there may be multiple contractors on site, none of whom work for the Prime, and so the Prime will have no effective control or authority over scheduling and work activity.

In a complex worksite any uncertainty or perceived uncertainty can have serious consequences where no one individual has the clear authority to coordinate all the work activity.

Another difference between the forest sector and other industries is that on construction sites supervisors are present for the entire shift, with the full authority to act as there are a number of different activities going on at the same time. Traditionally this is not always the case in the forest sector and on a complex worksite, this is a necessary requirement.

### **Considerations:**

Change is one constant in the forest sector that is not going away. Market conditions, government policy, weather conditions, labour contracts etc. will continue to play a role in defining how forests will be harvested and contractors or licensees will have to manage their operations in order to economically survive. A critical component of this is, as

management systems and style change at the operational level, the management, planning and human resources need to keep pace. There is a fine line between where integration becomes congestion and a worksite has shifted from a safe work place to one that is not.

Complex worksites are today's reality, and as the shifts that occur in the field for managing business imperatives, safety must be kept immune to those market cycles and operational pressures.

1. As the shift to more integrated and complex work sites continues the single most critical component in minimizing the potential for incidents and injury will be the human factor. The skills, roles, responsibilities of the line supervisors must keep pace with the technological and operational changes in the workplace. This is an extremely diverse industry from owner operators through to major licensees, union/non-union, company/contract operations, coast to interior; ensuring consistency in supervision across all of the sectors, where the differences are so dynamic, will be challenging. Therefore it is critical that the BCFSC develop a training module to support upgrading the skills of the line supervisors to create and promote an industry standard for managing complex worksites.
2. Industry review and clarify the roles and responsibilities of the designated Prime (contractor) versus those of licensee of the timber as well as how much responsibility rests with each party to effectively manage phase integration as it applies to WorkSafeBC Regulation 26.1.2. With the acceptance by WSBC that integrated work sites could become more common, the potential for four or more

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contractors working in four different phases in a single cut block where the designated Prime is just one of the contractors, potentially provides some very challenging conditions. The complexity of planning the worksite requires more clarity and detail on the roles and responsibilities of the designated Prime (contractor) versus those of licensee of the timber.

3. Contracting: Phase Integration for the most part is an inventory challenge tied to the changing economic and competitive climate of the industry. It will continue to push the industry in the direction where the inventory of roads, developed timber and log inventories will always be kept at minimum levels. As these are cost issues, there may be some commercial alternatives, joint ventures or partnerships licensees could consider that potentially meet the financial pressures they face while providing creative options for reducing the need for contractors to always be operating on multi-phase worksite.

For example, contractors may be prepared to take on the costs of block development, road construction, log inventories etc. if it allowed them to realize savings in other areas, which may also allow them to have greater flexibility in their operational plan while still ensuring the licensees still have access to the fiber they need and on a schedule that meets their commercial requirements.

4. CHAG, TAG and industry, with the support of BCFSC, continue to raise awareness of the importance of promoting a culture where all participants “feel” that they can freely raise issues and talk about complex

issues relating to phase congestion without fear.

5. Revisit and prioritize the initial CHAG recommendations:
  1. Create an industry standard that eliminates the practice of stacking.
  2. Incorporate scheduling of phases into the planning/harvesting process to reduce congestion and the chance of stacking.
  3. Reinforce that supervisors/workers have the authority to stop work and seek assistance if they feel congestion (or other issues) is creating a hazard or undo pressure.

It appears that the focus of these initial recommendations were to find ways to eliminate phase congestion not manage it. If that is no longer the operating reality, it is recommended that these efforts be directed at creating an industry guideline formalizing how to manage a congested worksite instead of how to prevent its existence in the first place.

6. Currently the owner of a forestry operation (most often the licensee) must ensure that all activities of the forestry operation are both planned and conducted in a manner consistent with Regulation and with safe work practices acceptable to the Board. Contractors who undertake the work and have knowledge and control of the activities must also ensure that any particular activity is both planned and conducted in the same manner. While there is a shared responsibility under Regulation, contractors may not have the same operating flexibility as a licensee has in their operations which creates challenges for the contractors to effectively control, manage and coordinate work activities. Greater effort needs to be made to ensure

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that there is a shared and coordinated responsibility in the safety outcomes as it applies to the owner/licensee of the timber and the contractor regardless of the business contract model.