Lesson 7: Policy and Regulations

What is new and what is not

90 minutes

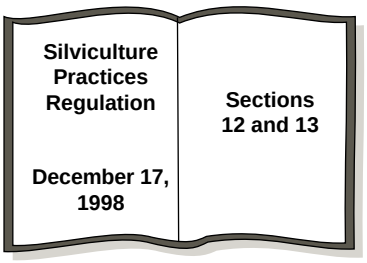
Lesson Objectives

- To provide participants with the most up-to-date policy direction based on the regulations in place.
- To help interpret the policy and regulations.

Method: Chief Forester Policy and Pertinent Regulations – Lecturette

- Go over the summary of key changes,
- Highlight the applicable regulations,
- Provide example Q and As.

Stand Density Management



Regulation changes from the April 1, 1998 SPR

Section 12 – removes former maximum density requirements from old SPs and PHSPs

Section 13 – rebuilds new requirements

Maximum Density

- **is now set at 10 000 sph unless specified otherwise by the regional manager.**
- **regional manager may specify a maximum density other than 10 000 sph.**
- **regional manager is not required to deviate from the default maximum density number of 10 000 sph.**
- **if over the maximum the SP holder must space to range specified in SP.**

Key Regulation Changes with Respect to Maximum Density

Summary of Key Changes

- general structure similar to the December 1997 OIC and the April 1, 1998 SPR
- SPR Section 12 exempts the requirement for maximum density for all previous SPs
- SPR Section 13 rebuilds back in the maximum density obligation

This amendment changes the SPR section 13 from the April 1, 1998 version in the following ways:

- the maximum density is set at 10 000 for all past and future prescriptions
- the regional manager may specify other numbers than 10 000 for both past and future Silviculture Prescriptions if he has followed the chief forester's policy and procedures
- there is a provision for the regional manager to make these new maximum density numbers retroactive on silviculture prescription areas that have not been declared free growing
- regional managers are not required to deviate from the default maximum density number

Specifically

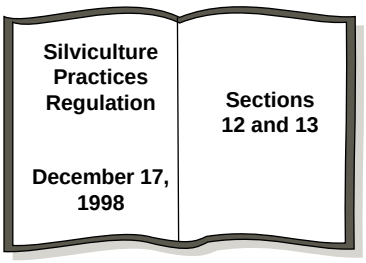
Section 13

This section establishes new maximum density obligations to replace the exemptions given in SPR Section 12. Under this new section, the district manager no longer has the authority to set out maximum density numbers. The authority to deviate from 10 000 sph resides with the regional manager.

Section 13 (1)

This section specifies that the maximum density of all SPs approved on or after April, 1994 will be considered to be 10 000 or another number specified by the regional manager. **If the number of coniferous trees exceeds 10 000 or a number specified by the regional manager, the SP holder must reduce the stand density to the post-spacing density range specified in the SP.**

Stand Density Management



Maximum Density – when to deviate from 10 000

When regional manager feels the number does not adequately manage and conserve the forest resource 13 (3), and

The chief forester has created policies and guidelines respecting 13 (6):

- **A maximum other than 10 000 sph**
- **Characteristics of a counted tree**
- **Different areas and species**

Key Regulation Changes with Respect to Maximum Density

Summary of Key Changes

This amendment changes the SPR section 13 from the April 1, 1998 version in the following ways:

- the regional manager may specify other numbers than 10 000 for both past and future Silviculture Prescriptions if he has followed the chief forester's policy and procedures
- regional managers are not required to deviate from the default maximum density number

Specifically

Section 13 (3)

This section gives the regional manager statutory authority to specify a maximum density number other than 10 000 provided that he is satisfied it is necessary in order to ensure that the forest resources are adequately managed and conserved. The regional manager may only create different maximum density numbers if the chief forester has established policies and guidelines.

Section 13 (4)

This section is intended to provide the regional manager with the authority **not to deviate from the default maximum density standard. He can not be compelled to specify another number if he does not wish to specify another number.** The intent of this section is to allow regional managers to have full control over when and if he wishes to deviate from the default maximum density number.

Section 13 (6)

This section gives the chief forester the authority to establish, vary or cancel policies and guidelines regarding the regional manager's specification of different maximum density numbers.

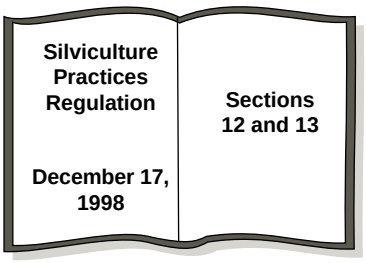
The section also provides the chief forester with the ability to establish, vary or cancel policies and guidelines respecting the characteristics of trees that must be counted for the purposes of determining maximum density obligations. This can include countable height and health conditions.

Initially the *Guidelines for Developing Stand Density Management Regimes* is the chief forester's guidelines. The *Stand Density Management Policy* is the chief forester's policy for stand density management. It is anticipated that over time the chief forester may issue additional policies and guidelines for specific areas or stand density management issues. These documents will be widely available in February 1999.

Section 13 (7)

This section is intended to compel the RM to follow the policies and guidelines developed by the chief forester.

Stand Density Management



Maximum Density – District Manager's Role

- **Consultation and review in the setting of maximum density numbers developed by the regional manager (no longer district manager's role to set maximum density numbers).**
- **For pre-1994 SPs:**
  - **over the maximum density**
  - **with no post-spacing density ranges specified (Pl & Fdi)**

  the district manager can specify a post-density range if the target will not adequately manage and conserve forest resources.

Key Regulation Changes with Respect to Maximum Density

Summary of Key Changes

This amendment changes the SPR section 13 from the April 1, 1998 version in the following ways:

- district managers will no longer be responsible for specifying or establishing new maximum density numbers. However, they are expected to be involved in the consultation and review process when new numbers are being developed by the regional manager
- for pre-1994 silviculture prescriptions (which do not have a post spacing density ranges specified) the district manager can specify the post-spacing density range by notice to the licensee

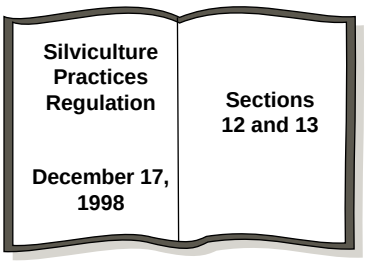
Specifically

Section 13 (2)

This section specifies that the maximum density of all SPs approved before April, 1994 will be considered to be 10 000 or another number specified by the regional manager (for Pl and Fdi). If the number of coniferous trees exceeds 10 000 or a number specified by the regional manager, **the SP holder must reduce the stand density to the target stocking standard specified in the SP or to within a range specified by the district manager.**

In SPs approved prior to April 1, 1994, there was no specification of post-spacing densities to be achieved on areas with a maximum density obligation. This section clarifies what the post spacing density must be before the end of the free growing assessment period.

Stand Density Management



Regulation changes from the April 1, 1998 SPR

Maximum Density – No deadline

Key Regulation Changes with Respect to Maximum Density

Summary of Key Changes

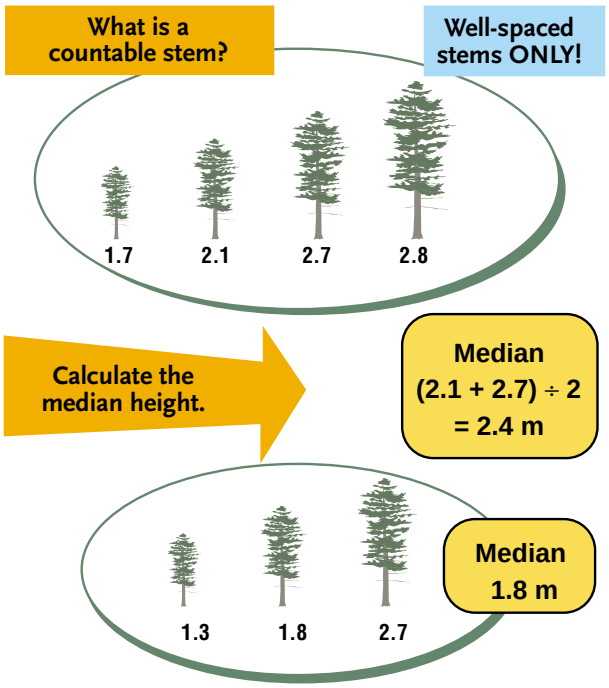
- general structure similar to the December 1997 OIC and the April 1, 1998 SPR
- SPR Section 12 exempts the requirement for max density for all previous SPs
- SPR Section 13 rebuilds back in the maximum density obligation

This amendment changes the SPR section 13 from the April 1, 1998 version in the following ways:

> ***there is no longer a deadline for the production of new maximum density numbers. The April 1998 version of the SPR required new numbers to be established by June 15, 2000, or the previous SP numbers would come back into effect. Due to staffing, funding and workload issues, operational staff have requested the removal of the deadline.***

Stand Density Management

Maximum Density – What is counted? 13(9)



What is a Countable Stem

Calculation of the median height is very simple for odd numbers of stems as it is the height of the middle tree. For even numbers you add the two in the middle together and divide by two.

Note the difference between median and mean (the mean is the arithmetic average). The mode, if someone brings it up, is the most common number in the group – 1.2, 1.2, 1.2, 3 – has a mode of 1.2.

Note: ***The median height is calculated for each plot and used to determine countable stems.***

What is a Countable Stem

Median height is 2.4 (2.1 + 2.7 ÷ 2 = 2.4)

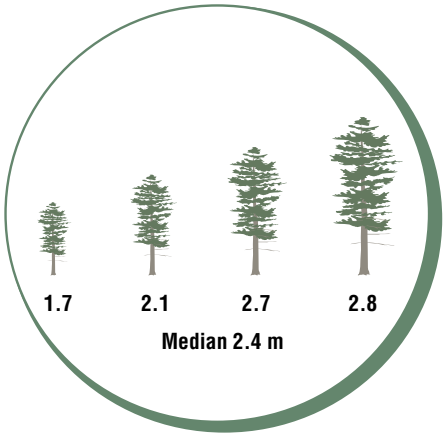
The intent of having a minimum height criteria is to avoid counting stems towards maximum density when there is little likelihood of them being competitors.

Twenty percent was used to provide a level of certainty that non-countable trees would eventually become competitors and reduce diameter growth potential. The initial number was any stem that became established during the first seven years post harvest.

Note: ***The 20% factor was chosen by a ministry/industry working group given the task of defining a countable stem. The new working group revisiting this issue again and reconfirmed using 20% of the median height as a countable stem.***

Stand Density Management

Maximum Density – What is counted? 13(9)



All stems above:

20% of the median height

20% of 2.4 = 48 cm

Note – only layer 3 (1.3 m to 7.5 cm dbh) are counted for uneven-aged management.

Chief Forester's Policy

Straight from the Policy Document

Maximum density – the maximum number of coniferous trees allowed per hectare in a free growing stand. This number is specified in countable trees per hectare.

- Without density control, areas exceeding the specified maximum density number are not expected to produce the acceptable stand conditions within desired time periods.
- Only those portions (i.e., a forest cover or survey strata) of a standards unit area within a Silviculture Prescription that exceed this number must be spaced.

Maximum density is not to be equated with a repression density or stand densities that result in reduced site index.

Countable trees – are trees that meet specific height criteria or characteristics, and are tallied in a silviculture survey to determine stand density and maximum density obligations.

Stand Density Management

Chief Forester's Policy

Guidelines provide guidance and are not a "how to"

Policy helps define how to use the guidelines

You need a team:

- **Knowledgeable folks from your area.**

You need to know what you want:

- **A series of density management regimes and maximum density values for a regional, district, geographic, or licensee-specific area.**
- **Maximum density numbers should preferably be based on a management unit basis (i.e., TSA/TFL). However, they may be developed on a management zone, ecosystem, or diversified portfolio basis.**
- **This approach can be used for discretionary/incremental funded priority setting as well (recommended).**

Stand Density Management

Chief Forester's Policy

Definition of Maximum Density –

- **The maximum number of coniferous trees allowed per ha in a free growing stand**
- **Without density control, will not produce acceptable stand conditions in an acceptable timeframe**
- **Not equated with repression density**

Note:

- **Only those portions of a standards unit that exceed this number must be spaced.**

Stand Density Management

Chief Forester's Policy

Policy helps define how to use the guidelines

You need to know who does the analysis

- **may be done by region, district, or licensee staff**
- **must be consistent with chief forester policy**
- **must be done in consultation with district and regional staff.**

You need to know how to do the analysis

Full stand- and forest-level evaluation and analysis of different regimes

Piggy back with other initiatives

Best estimates based on a series of meetings with appropriate stakeholders and subject matter experts

Chief Forester's Policy

Straight from the Policy Document

Who does the analysis? – may be done by region, district, or licensee staff, but must be consistent with this policy. The analysis must be done in consultation with district and regional staff.

How to do the analysis–

- The most desirable approach for the development of new density management regimes is to carry out full stand and forest level evaluation and analysis of different stand density management regimes.
- Where possible, the development of stand density management regimes should be integrated with other analyses currently underway (e.g., analyses for Innovative Forest Practices Agreements, Enhanced Forest Management Pilot Projects, Timber Supply Review 2, Forest Level Incremental Silviculture analyses, etc.).
- In some cases staff time and funding may be limited and preclude a full scale analysis. Regions, districts, and licensees may develop new numbers (best estimates of density management regimes that are appropriate for different areas and conditions) by setting up a series of meetings with appropriate subject matter experts and operational staff.

The regional manager is the statutory decision maker responsible for the specification of any new maximum density numbers and should therefore approve which approach is taken and the assumptions to be used in the development of new numbers.

Chief Forester's Policy

Straight from the Policy Document

Forest production objectives – high value forest products is the objective unless otherwise specifically identified in existing woodlot management plans, TFL management plans, or TSA objectives.

Consideration of existing stocking standards – new stand density regimes should be developed with consideration of the forest or product objectives that are embodied in existing minimum and target stocking standards.

Existing higher level plans – stand density regimes that are identified in higher level plans (i.e., Land and Resource Management Plans or Landscape Unit Plans) must be considered in any analysis.

Options and risks – stand density regimes should be developed that maintain options and minimize risks for future generations. Stand density regimes should ensure options are maintained for future harvest ages, species mixes, and forest values.

Target stocking standard – unless the district manager approves otherwise, the target stocking standard should be set at the density of trees at the free growing time period that will achieve the target stand conditions at the specified harvest age.

Minimum stocking standard – unless the district manager approves otherwise, minimum stocking standards should be set at a density of trees that considers the entire silviculture regime, including any intermediate interventions, and does not result in significant merchantable volume reductions compared to a stand at the target stocking standard.

Maximum density or upper density limit – should be developed with consideration of the desired target and minimum stocking standards and consistent with analyses done using this policy and the guidelines.

Chief Forester's Policy

What should go into the building of regimes

You need to know who does the analysis

- forest product objectives
- consider existing stocking standards – minimums and targets
- existing higher level plans
- options and risks
- maximum density to coincide with minimums and targets
- wildlife and forage information
- understorey biodiversity values
- special ecosystems
- partial cutting
- forest health
- landscape-level objectives

Areas outlined in green may require additional assessments from those outlined in the guidelines.

Chief Forester's Policy

Forest and Stand Modeling
Assumptions and Requirements

See Policy for details

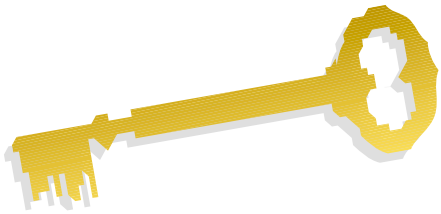
Chief Forester's Policy

Straight from the Policy Document

The following are minimum forest and stand modelling assumptions and requirements that should be included in the development of stand density management regimes:

- utilization standards – unless otherwise approved by the regional manager, use assumptions consistent with the current or last approved Timber Supply Review
- ensure that the key Forest Practice Code requirements (i.e., green-up, riparian management zone requirements, landscape unit objectives) are considered
- use appropriate stand and forest level models
- ensure key assumptions included in the analysis consider the current or recently approved TSR
- where there is a need to make significant variances from the current or last approved TSR, new assumptions need to be reviewed with and approved by the regional manager
- consider the need for any intermediate interventions (i.e., commercial thinning) in the design of stand density management regimes
- yield curves used to represent an analysis unit in a forest level analysis (unique combination of species, site class, and density management regime) must be realistic and adequately represent site conditions and the intended management objectives and practices and basic silviculture obligation levels
- the evaluation and determination of a stand density regime will result in the identification of stand densities that are desired at various time periods during the development of a stand. Consideration must be given to the types of operable stand conditions (such as piece size distribution, merchantable volume) that are needed to ensure a stand can be economically harvested. The evaluation should result in the identification of appropriate density management standards that ensure stand, landscape, and/or forest objectives can be achieved.

Stand Density Management



Points in Specifying a Maximum Density Number

- **10 000 is the default for SPs unless new numbers have been developed under SPR 13, the guidelines and the chief forester's policy**
- **New maximum density numbers should consider stand, forest and landscape objectives**
- **They should be aimed at improving or maintaining an economically viable timber supply**
- **Some maximum density numbers may be created to achieve wildlife objectives**

Chief Forester's Policy

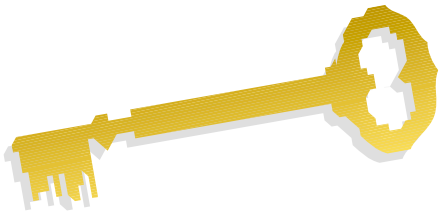
Straight from the Policy Document

Key points in the specification of a maximum density number:

1. The default maximum density number to be included in Silviculture Prescriptions is 10 000 sph unless new numbers have been developed following the *Silviculture Practices Regulation* Section 13, the guidelines, and this policy.
2. Any new maximum density numbers should be developed with consideration of stand, landscape, and forest issues and objectives. They should be aimed at improving or maintaining an economically viable timber supply.
3. Specific stand densities may be required to achieve wildlife objectives identified in a higher level plan, a TFL management plan, or *Managing Identified Wildlife: Procedures and Measures.* In select areas, maximum density numbers may be specified for ungulate winter range, special management zones, and/or wildlife habitat areas.

(continued)

Stand Density Management



Points in Specifying a Maximum Density Number

- **For applying density numbers on pre-1997 SPs they should not be more onerous.**
- **Regional manager can vary from 10 000 if the regional manager considers a number other than 10 000 is needed to adequately manage and conserve the forest resources.**

Chief Forester's Policy

Straight from the Policy Document

Key points in the specification of a maximum density number:

4. When specifying any maximum density numbers that are to be applied to SPs approved on or before December 30, 1997, the regional manager should consider the potential financial implications. The regional manager should not normally specify a retrospective number that would result in a more onerous financial obligation than the maximum density numbers contained in SPs approved on or before December 30, 1997.
5. The regional manager may specify a maximum density number other than 10 000 if satisfied that a number other than 10 000 is necessary to ensure that the forest resources are adequately managed and conserved in an area. In determining adequate management and conservation of the forest resources, the regional manager should consider points 1–4.