
Guidance for Professional Quality Rationales and Commitments

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Guidelines

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The practice of professional forestry is complex and therefore forest professionals are required to interpret the ecology, be knowledgeable on objectives, legal requirements and other aspects in order to make decisions regarding courses of action or management in the forest. The forest professional's decision can be visible, affect other forest resource values and have a lasting impact.

The importance of the professional decision is one reason why professional practice standards are provided to members as three essential components of competence: knowledge, completeness and correctness and professional care. The characteristics of the three components can be traced through the forest resource decisions. In cases where the characteristics of the decision are not obviously evident, the forest professional uses a professional rationale as the primary means of documentation.

Professional decisions often form the structure and the content of commitments to forest management or stages in forest management by the forest professional for a third party (owner or licensee). The act of making competent choices in the management of forest resources for the public, employers and others, and being accountable for the consequences of the choices is one element that underscores a forest professional's contribution to the commitment.

Developing Professional Rationales

As forest professionals we are obligated to be competent in our fields of practice. We apply our knowledge to decisions and actions within the practice of professional forestry, recognizing and respecting the sometimes, competing values and interests in forest management. We support our decisions and actions in writing, to the degree of care that a prudent professional would exercise under the same or similar circumstances. A product of our competence is the professional decision and supporting rationale that demonstrates we are worthy of the public's trust and professional reliance. The purpose of a rationale is to support a decision or action, avoid a misunderstanding, demonstrate due diligence and clearly explain the intent so the decision or prescription can be understood and implemented.

What is a Rationale?

A rationale is a description of the underlying foundation for an action taken or decision made. It is an explanation of the controlling principles in the circumstance, the intellectual or sensible path chosen and the logic toward the expected outcome, opinion, or practice. Depending on the situation, decision or action, the rationale is often written, provides supporting documentation, identifies the accountability linkages, and reveals the diligence or zeal with which the professional undertook the work.

When is a Rationale Required?

Forest professionals constantly build rationales in their work, including, analyzing the knowledge components of a practice issue, using their skills in probing options and filtering the information through personal experience, objectives and legal requirements. Forest professionals routinely reflect on the ‘whys’ of what they have proposed in order to meet the needs and challenges of plan implementation or respond to potential questions, either from the public or plan reviewers/auditors. Therefore, all professional decisions require a rationale. The practical side of the question is when does the rationale need to be written and to what detail and extent?

The incomplete answer to this question rests with the intended user of the professional’s service. Incomplete, because the variations in products of professional service, combined with the multiplicity of clients, employers, landowners, and workers who might individually or all require understanding of the professional decision is too large to describe rules or directions. Instead, the necessity for a written rationale is based on the requirement of an intended user to understand the professional decision or resultant action. Decisions, complete with rationales and ancillary documents, must be sufficient to meet the intended objectives of the decisions and actions.

For example, if the professional decisions are embedded in a prescription for treatment, then it is reasonable to expect that the forest professional provide sufficient explanation for the intended individual(s) to complete the work. If on the other hand, the professional decision incorporates current technical standards approved and generally practiced by practitioners, then sufficiency can be met without excess of description or text.

The requirement for a written rationale is often only completely understood well after the decision or action is acted upon and commonly too late for alteration or addition. As a result, the prudent forest professional will apply a conservative assessment as to when a rationale should be written and the necessary detail and extent.

Guideline for Writing a Rationale

A set of rules or specific steps for writing rationales is not appropriate for the reasons stated above. Instead a guideline for writing a rationale will promote consistency and establish a standard that is commonly applied by the reasonable forest professional in a similar situations. The guideline uses a framework to provide direction in the form of recommended content and intentions, followed by a list of open-ended considerations when writing rationales.

A Framework for a Written Rationale

The written rationale is commensurate with the requirement to achieve the stated objectives of the professional decision or action. Depending on the proportional requirement the rationale content should:

1. Accompany the identified objectives, decisions or prescriptions;
2. Contain brief background information to explain the intent of objectives, decisions or prescriptions. This includes an explanation of innovation or methodologies and decisions which are different from the norm. If possible, this information should be supported by valid documentation and references e.g. published journals and scientific research;
3. Consider alternative courses of action for achieving objectives, decisions or prescriptions;
4. Practice due diligence and professional reliance;
5. If applicable, provide a brief prediction or evaluation of the possible consequences of each alternative; and
6. Support effective and efficient decision making.

The written rationale presents clear and convincing explanation to achieve the stated objectives of the professional decision or action. The written rationale content should:

1. Be clear and concise, so an independent person/party can visualize and understand the implications of, and implement the decision, plan or prescription;
2. Be well thought out, and encourage understanding (use common sense);
3. Write objectively (avoid bias) and don't misrepresent the facts;
4. Avoid technical jargon, i.e.: be 'public friendly';
5. Tactfully present your rationale to support your professional opinion;
6. Be specific and thorough enough to support your choice;
7. Distinguish between what is the science behind your rationale and what is government policy, if appropriate;

8. Be reasonable and be supported by measurable or verifiable outcomes;
9. Explain earlier history, events, and future expected outcomes; and
10. Identify risk and discuss risk management.

A professional quality rationale supports the principles of professional reliance and sufficiently explains the professional opinion or decision. Properly written, a professional quality rationale improves understanding and success of decisions being implemented as intended.

Examples of Inappropriate or Incomplete Rationales

- “As stated in goals.”
- “The stocking standard should be reduced because the survey recommends it.”
- “I have selected Fdi seed in the CWHds1 – because I do not agree with the seed zone chart.”
- “This management scheme will meet my objectives.”
- “It’s my professional opinion.”
- “It will benefit the site.”
- “It will agree with wildlife patterns in the area.”
- “It is a program requirement.”
- “I worked with the public to determine this plan.”
- “I have incorporated technology into this management scheme, thus it should work.”

Examples of Appropriate Rationales

1. Free growing survey

A forest professional decides that a lower Douglas-fir (Fd) stocking standard is required to provide for a free growing declaration on a site.

The accompanied written rationale includes:

- Background information to explain the intent of the decision: e.g. a field survey documents that Douglas-fir has met and exceeded the minimum free growing requirements detailed in a prescription. The site contains a high rock percentage in the area that limits a fill plant micro-site availability.
- Consider alternative courses of action for achieving objectives, decisions: Waiting 7-10 or more years for Fd naturals to potentially fill in the site, the free growing time frame will be exceeded so this is not a suitable solution for this site.
- Provide a brief prediction or evaluation of the possible consequences: Because of the substantial vigour of the conifer stand and minimal brush

competition, it is my opinion (based on local knowledge and experience) this stand will remain free growing into the future to produce a viable forest. The surrounding Fd stands in the area support the expected continuation of the stand in a free growing state.

- Support effective and efficient decision making: The surveyed forest provides an economically responsible option to achieve the desired forest characteristics that meet expectations identified in the current timber supply forecast for the area.

2. Tree species selection in a prescription

Cottonwood is not currently an acceptable species as noted in the regional stocking standards within the IDFxh1 -08. (Cottonwood is currently a tertiary species). For the purposes of designing a prescription cottonwood is included by the forest professional as an acceptable species.

The accompanied written rationale includes:

- Background information to explain the intent of the decision: The prescription is located within an ungulate range corridor. The range area is noted in the Colorado area higher level plan as a range with opportunity to increase the deciduous component in Douglas-fir- ponderosa pine stands to enhance winter range sites. The area in question has been field reviewed and is deemed to be a reasonable size and ecological composition for cottonwood.
- Consider alternative courses of action for achieving objectives, decisions: An alternative course of action would be to vary from the higher level plan objective on this site and locate other areas to accommodate this strategy.
- Provide a brief prediction or evaluation of the possible consequences: The endemic levels of cottonwood in the stands are expected to slightly increase once harvest is complete, thus requiring no planting of cottonwood sprigs. Cottonwood numbers are not expected to exceed the Douglas-fir and ponderosa pine components in the stand. The fir and pine are growing with excellent form and vigour and are expected to continue to do so.
- Support effective and efficient decision making: The planned forest provides an ecologically responsible option to achieve desired wildlife and forest options. There are no negative consequences for the acceptance of the cottonwood on this site.

3. Amending a prescription completed by another forest professional

A forest professional is amending a prescription from several years past to change a designed brush to conifer ratio. The new brush target has been

increased to 140% from the regional standard of 125%.

The accompanied written rationale includes:

- Background information to explain the intent of the decision: Current field review of DK1 – 99 sites within the Ogoogo Forest District concur with documented brush to conifer relationship studies from the Sydney Lake Research Centre. These studies have shown on medium to poor sites, low and tall shrub vegetation does not significantly impede the growth of conifers at free growing and within the 10 years following the declaration. No data was collected at the Sydney Lake site past this time frame although no known ecological factors are expected to impact the free growing state of the conifers at that point in time.
- Consider alternative courses of action for achieving objectives, decisions: The alternative that exists is to hand brush this site. Because of the low elevation and proximity to the High Rim Trail (high use recreation trail) the fire hazard is typically high and of concern. The additional fine fuel loading associated with a brushing treatment is not a viable option in this circumstance. Choosing the alternative to accept a higher brush to conifer ratio is preferred.
- Practice due diligence and professional reliance: Operational experience and local observations made by the forest professional show that on medium to poor sites, low and tall shrub vegetation does not significantly impede the growth of conifers at free growing or beyond.
- Provide a brief prediction or evaluation of the possible consequences: Forest characteristics related to free growing criteria will be achieved.
- Support effective and efficient decision making: The brush to conifer ratio has been amended to compensate for this specific opening i.e.: the brush to conifer ratio has been increased to 140% from the regional standard of 125%.

4. Partial Cutting Prescription

A forest professional designs a prescription to partial cut steep slope terrain in a community watershed. For the purposes of designing a prescription cottonwood is included by the forest professional as an acceptable species.

The accompanied written rationale includes:

- Background information to explain the intent of the decision: Leading Douglas-fir forest is slowly dying due to decay and falling from canopy. Hemlock forest is growing under and replacing fir in the gaps. Active ravel on 60 to 100% slopes. Old-growth fir and cedar in the narrow canyon river bottom. Murrlets in the area.
- Consider alternative courses of action for achieving objectives, decisions: Partial cutting strategy (intermediate cut) to create gaps and introduce red cedar

is preferred over other alternatives including clear cut silviculture system.

- Practise due diligence and professional reliance: Establish a sampling method to determine forest types, species profile and stock tables. Obtain slope and terrain stability assessments from professional expertise. Obtain assessments and expertise of a registered professional biologist. Obtain the professional expertise of a harvesting specialist and tree climber. Use the team approach to design treatment prescriptions for specific management situations and combinations of values. Obtain company management commitment to a longer term of prescription than currently utilized in order to adapt to changes.
- Provide a brief prediction or evaluation of the possible consequences: Artificial reforestation and development of an understory red cedar forest. Expect reduced growth in increased shade areas. Identify expected stocking levels and minimum gap size to maintain appropriate light levels.
- Support effective and efficient decision making: Establish a regular monitoring system for a) future prescriptions and b) to prescribe additional treatments to ensure the objectives of the prescription are achieved as prescribed.

Developing Professional Commitments

Professional decisions often are used to inform the discussion or define the content of commitments in forest management. Commitments are found in site level prescriptive work or in forest and landscape level work. Establishing a commitment in a professional service or product can also require a written rationale.

Commitments are related to rationales in that a commitment is an agreement that an action will occur and the rationale is the explanation of why, in a professional's opinion, that an action should occur. Writing a clear commitment is as important as selecting understandable wording in the professional document. Commitments should include many of the key elements of rationales.

When a plan commitment is clear and concise it provides the variety of users of professional service with the assurance that a plan is well thought out. It provides potential implementers with clear direction on how to achieve and measure the results required, and gives the prescription designer the assurance that the plan will be implemented in a manner to which it is intended to be managed.

The current regulatory framework for forest management in BC describes specific characteristics of commitments. For the purposes of examining the content and context of commitment the words “results or strategies must be measurable or verifiable” will be discussed. The current regulations define a “result” as a measurable or verifiable outcome. Similarly, a “strategy” is defined as measurable or verifiable steps or practices. Evaluating the components separately provides a view

of the common expectations regarding commitments.

What is Measurable?

A measure commonly describes a specific set of properties that can be physically described or counted. In the literary sense something is measurable if it has a numeric classification. There is also a standard of measure which sets a baseline for future comparison. That is there is an expectation described or an outcome; there is a reliance on specialized skill and knowledge; there are established processes for action and agreement on how the outcomes will be evaluated.

In the simplest method a result or strategy is measurable if achievement was objectively assessable, usually by a numerical indicator. An increased complexity regarding a standard of measure increases the risk that the outcomes will not be measurable. The extent to which the outcome must be strictly measurable should be proportional to the value that it represents.

Outcomes can be un-measurable if they include confounding qualifiers such as “if necessary” or “will move towards” or subjective qualifiers such as “if practicable.” Outcomes are also un-measurable when numeric indicators are too broad to offer a reasonable assessment of the outcome.

What is Verifiable?

Verifiable is generally understood as being able to establish truth, accuracy or reality of existence. The quality of verification in a commitment is one aspect of testing whether a defined outcome has been achieved. The complementary quality to verification is validation. Prior to an outcome being measured and verified the professional will have determined that it is a valid indicator or representation of the objectives to be achieved. In short, validation confirms that the outcome is the right thing and verification determines that the outcome was achieved. All of the components form the verification process in evaluating a commitment.

A recent audit report provided a description and example of a verifiable strategy. The opinion was that a verifiable strategy is one that inherently communicates its meaning. The example provided is “The holders of this FSP will make reasonable efforts to communicate development plans to affected First Nation Bands.”

The stated strategy is verifiable in that the licensee can produce documents or records to show that it made efforts to communicate with the local first nations.

The same report assessed the relative strength of the measure and validity by observing:

- There is no measurable element to assess the extent to which the strategy is carried out;

- There is no result or expected outcome to attest to the validity of a meaningful consultation objective, such as an expected success rate in communicating or percentage of bands that provide input; and
- The strategy includes un-measurable qualifying words, such as “reasonable efforts.”

The current example serves to emphasize the importance of the core statement. In planning a strategy or result the professional designing the commitment should reflect on three questions: *Is the outcome a valid representation of an objective? How will I measure success of this strategy or result? How will I verify the achievement of this strategy or result?*

Clear and convincing commitments provide a high level of confidence in a plan and professional document. Professional diligence is an important aspect to the commitment verification process. “Due diligence includes taking all necessary steps to enable the member to demonstrate to those who may question their work that all appropriate factors were considered and steps taken to do the job in a professional manner. A crucial aspect of due diligence, therefore, includes keeping and maintaining appropriate files and filing systems as well as document retention and policies.” (ABCFP – Practice Standards – Guidelines for Interpretation)

In addition to the qualities of measure, verification and validity, it is essential in professional forestry practice that commitments be reasonable and achievable.

Using the First Nations example above, an improved commitment could have continued to say:

“The holders of this FSP will deliver a copy of this plan to affected Band representatives. This action will be followed up with documented phone communication within 30 days, and a second letter that offers to meet and review plan details. If no communication from the Band results after the review time period lapses, the holders of the FSP will notify the District Manager in writing of the efforts.”

Commitments are found in site-level prescriptive work or in forest and landscape-level work. Establishing a commitment in a professional service or product can also require a written rationale.

Guidelines for Writing a Commitment

The commitment as an agreement or obligation is useful to the extent that it is clear, concise and meets the characteristics of a verification process. As such a set of rules or specific steps for writing commitments are not practical tools for the forest

professional. A series of benchmark questions will promote the establishment of a standard that is commonly applied by the reasonable forest professional in a similar situations.

When developing a professional quality commitment the kinds of questions that are necessary to answer are as follows:

1. Commitment implementation: In order to evaluate the appropriateness of existing due diligence systems (e.g. Standard Operating Procedures) or develop new ones, “Who will develop or revise the expected standards and when.”
2. Verification Process:
 - Why are we monitoring the outcome (i.e. the result or strategy)?
 - Will the monitoring ensure achievement and verification?
 - How often should the monitoring be carried out?
 - Who will be responsible and accountable for carrying out the monitoring?
 - Where will the monitoring occur (type of sites, location and repetition)?
 - What will you actually monitor in order to document achievement and verification (indicators)? What are your desired targets?
 - Determine the monitoring methodology for data collection. How will you address quality control, sampling design and data collection, reliability, data accessibility, and analysis?
 - Determine how you will use the monitoring results to improve the quality, achievement and verification of your result or strategy.

Examples of Commitments

1. Invasive plant objective

Non-measurable or non-verifiable commitment: If an invasive plant has been located within the plan area at post harvest or post road construction, it will be managed accordingly.

Measurable or verifiable commitment: Within the plan area occurrence of knapweed and thistle are known in the ICH and IDF Biogeoclimatic zones, being particularly problematic along roads, on landings, and on disturbed sites (i.e. transmission corridors). Newly constructed roads and deactivated roads and landings will be grass seeded as soon as site conditions allow within one year of disturbance to limit the spread of invasive plant species. Upon field completion of this task, the date and grass mixture used will be documented in section 4.0 of the 2010 road tracking manual.

Is it measurable? – Did the task get completed in the time committed? Is it verifiable?

Can you confirm: a) the grass seed was applied in the field and b) the documentation to verify the action?

2. Range barriers breach

Non-measurable or non-verifiable commitment: Upon determination of a breach to a range barrier, the rancher will be contacted and a plan will be developed, if possible.

Measurable or verifiable commitment: Within the plan area two range tenure holders exist. Currently, both ranges are separated by timber boundaries. If a harvest plan breaches a range tenure boundary, prior to commencement of harvest:

- The range tenure holder will receive a documented phone call with notification of the potential breach.
- A paper copy of the harvest plan and a map will be sent in the mail.
- The licensee will make a minimum of three efforts (documented by date and time and filed in the range communications file) to reach the rancher to determine and build a fence line. Upon completion of an agreement it will be documented and copied to the block specific file.

Literature Referenced

ABCFP Professional Practice Standards – Guidelines for Interpretation.

Forest and Range Practices Act

Forest Practices Board Report. *A review of the early Forest Stewardship Plans under FRPA*. May 2006.



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