



January 8, 2016

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Re: Timber Regulation and Forest Restoration Program Pilot Projects Revised  
Concept Paper

Dear Russ (and others),

I wanted to take a few moments to outline some additional comments on the Forest Planning Watershed Pilot Projects Revised Concept Paper dated December 2, 2015. I appreciate the public meetings you've held on this topic, and I hope that you find my comments in the constructive manner in which they are intended. Please feel free to share these comments with others as appropriate. As always, I'm happy to chat more if it would help to clarify any particular concepts.

I greatly appreciate the desire to limit the scope of work, especially for the pilot project. My bigger concern is that I strongly suspect the proposed key questions will struggle to sufficiently guide thoughtful development of a program. I suspect the current structure of the key questions and approach may devolve into a meaningless, disjointed data inventory instead of a thoughtful conditional assessment that could otherwise set a solid foundation for a fresh approach.

While I continue to applaud the general direction and intent of the TRFR program, I suspect the existing key questions are too generalized and vague to provide much guidance to the process moving forward. I am also concerned with the lack of a clear approach and the primary focus on *gaps in data* instead of *gaps in understanding*. Seeking data gaps will more than likely bog the process down in unnecessary data collection activities without leading to substantive efficiencies or improved systematic knowledge/understanding. Such endeavors inevitably lead to a "fishing expedition" trying to make sense out of data without a clear set of working hypotheses. It's a classic "cart before the horse" problem that will most likely lead to a long "laundry-list" of data desires without a clear idea of how to use the data. Such processes typically prove to be very inefficient, expensive and tend to promote

a greater sense of confusion.

I might suggest beginning by clarifying what is known and what remains unknown about the impacts from existing harvest, road management, fire suppression, and related human activities. Some key questions related to this approach might include:

- What do we know about the ecological structure of the watershed and the impacts from forestry practices?
- What don't we know (or have conflicting evidence for)?
- Is the source of understanding specifically derived from information provided in the THP, general regulatory guidance, baseline science studies, interpretations based on other data, or conclusions drawn from 3<sup>rd</sup>-party studies.
- What is the level of confidence or controversy around each topic?
- Can additional (perhaps theoretical) understanding be obtained from other sources? How reliable is this new information?

The level of specificity of this type of approach is more likely to yield informative insights into the opportunities presented by the TRFR.

**Starting with what we know about these systems may be a sound place to begin such lines of inquiry.** A good example is the focus on key performance indicators for select proxy functions in the watershed. In our work for the Board of Forestry Riparian Literature Review, we focused on 5 essential domains (wood, water, sediment, nutrients/biotics, and temperature). Referring back to the conclusions (and outstanding uncertainties) of this previous work would offer a very credible science-based approach. Of course, a similar effort for other functions may also be beneficial (e.g., terrestrial habitats, fire ecology, etc.).

Such an approach might seek to understand *what is the LEAST amount of data that we need to understand the impact of a specific activity on the landscape*. Once we have an understanding of a particular impact, systematically collecting more data on that impact is often wasteful and inefficient. Since one of the objective is to identify opportunities for efficiencies, focusing more on the extraneous data is likely to be a very powerful approach.

**Meta-Analysis Alternative Approach.** I can't help but wonder if a meta-analysis of multiple watersheds might better identify opportunities to evaluate trends with regard to limits in understanding. Key questions suitable to a meta-analysis might include (among others):

- How much data is available from THPs as compared to other sources of information (e.g. geospatial datasets, remote sensing data sources, etc.)?
- What level of effort did it take to compile various THP requirements (e.g., what is the cost of THP preparation relative to the value provided)?

- What is the value of the data collection with regard to informing management actions and/or permitting questions?
- Are there more cost-effective ways to characterize key data?
- What data is redundant between THPs and how frequently is this data updated?
- Does more information lead to greater understanding or does it lead to more confusion in the absence of clear working hypotheses?

**Minimum Data Standards.** Instead of establishing a minimum standard for data quality, I might suggest that obtained data simply be given a data quality rating based on specified criteria. The value of data can be established only AFTER the overall line of inquiry is understood. Often, low-quality data can be effective at addressing some issues (e.g., validation) but insufficient for others (e.g., effectiveness). Excluding data sources without understanding the questions the data can inform seems a bit short-sighted.

## Critical Questions

There are several additional directions of inquiry that could effectively inform the issues that the TRFR is charged with resolving. I remain concerned that the critical questions in the Concept Paper are inherently vague, difficult to answer, and lack a clear assessment approach. Frankly, it's not clear how these questions will lead to specific TRFR direction.

It's not entirely clear how some of the Critical Questions can be evaluated within the context of a review of THPs in a planning-scale watershed. Some of these questions would require a different mode of inquiry. For example, question, #6 (What restoration needs or cumulative impacts can be identified from the planning watershed scale versus needing a different spatial context?) may be better informed by literature review/synthesis and a more clear idea of what cumulative effects measures are used.

Other existing questions require certain pre-requisite information is available to the PPWG. For example, evaluating if the THPs have sufficient information to guide restoration (Q2) implies that we have a clear agreement as to the information that is necessary to drive restoration planning. Not sure if this line of inquiry will be part of the scope for the PPWG or other bodies associated with the overall program.

One example of a more relevant question might be:

**How relevant are various sources of current (and historical) data in characterizing the likely short-term and long-term effects of forest management activities?**

- What are the limits in using historical data?

- What is the value in understanding specific time-series relationships and trend relationships?
- What sources of information are available that characterize the critical disturbances that affect environmental data (e.g., floods, fire, infestation, disease, harvest, etc.)?
- What (if any) currently required data are no longer relevant to making sound decisions on the landscape?

These types of questions offer considerably greater specific direction to the team.

## Environmental Management Systems as an Organizational Framework

**There may be benefit of thinking of this exercise as designing a more functional Environmental Management System (EMS)** wherein the goal of the regulatory system is to a) validate assumptions, b) promote appropriate conditional reporting to support trends assessments, c) avoid unintended consequences, d) ensure compliance with existing rules, and e) ensure the effectiveness of the overall management systems in place.

A functional EMS depends on a variety of sources of information that are not limited to the THP process. Other sources may include other existing geospatial data, monitoring systems, research activities, 3<sup>rd</sup>-party studies, etc.

Figure 2 in the concept paper begins to outline the relationships among the management systems, but needs to consider other management practices (e.g., fire suppression, roads, etc.) as well as environmental process/function linkages (e.g., sediment production, thermal regimes, habitat maintenance functions, etc.), as these factors impose substantial impacts on the net environmental condition. Understanding these linkages will yield much greater insight into the critical information requirements for THP efficiency, restoration and cumulative effects.

For example, is it safe to assume that the regulatory systems for harvest and roads are strong? If so, are fire suppression activities responsible for undercutting many of the protections imposed by these regulatory systems? A more relevant approach affecting restoration and cumulative effects might be the documentation of deviations from expected norms that come with a) emergency actions (e.g., fire suppression), b) unusual natural events (e.g., floods, earthquake, infestation, fire, etc.) relative to the natural recovery trajectory projected from existing forest conditions. This may extend beyond the current scope of the TRFR, but using the pilots study to frame this eventual line of inquiry provides a very substantive purpose to the pilot.

## Consensus

Finally, while I am typically a strong advocate for the power of consensus in many types of deliberative bodies, the objectives and authority of the PPWG suggests to me that **Consensus in this case is more liability than benefit**. Consensus works best when the representatives have the authority to bind broader stakeholder groups into implementation commitments. This authority is lacking in the current structure of the committee.

**In seeking paths forward in the context of a pilot project, descriptive responses will be MUCH more valuable than consensus responses.** The value of consensus here may be unnecessarily limiting as this is an exploratory group seeking to develop answers to critical questions. *It is much more informative if the group reports ALL perspective responses to the critical questions, each with sufficient justification to support each answer, and some general sense of the agreement or countervailing viewpoints from the committee as a whole.* This approach will allow a much broader integration of perspective viewpoints in the period following the pilot projects.

## Conclusions

I hope you find these comments in the constructive manner in which they are intended. I remain cautiously optimistic about the potential afforded by the TRFR, but concerned that a weak structure and approach may undercut the value of the exercise and compromise the momentum and good-will afforded by the opportunity.

As always, please feel free to contact me with any questions. I can be reached at (510) 927-2099 or [REDACTED]

Sincerely,

Mike Liquori  
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