Trees to Tap Project
Steering Committee Meeting #2
Tuesday, 13 March 2018, 11:00am-2:00pm

Agenda

11:00-11:10am	Welcome (*Mike Cloughesy, OFRI; Jon Souder, OSU College of Forestry; Lisa Gaines, Institute for Natural Resources*) – Review agenda and last meeting notes
11:10-11:40am (including Q&A)	*Emily Jane Davis*, Municipal Water Suppliers Survey Draft
11:45-noon	Break and lunches

12:00-12:20pm	*Jeff Behan, Institute for Natural Resources*
	   – Preliminary results of parameter search
	   – Draft search protocol

12:30-1:50pm	Discussion
	   – Searching the literature
	   – Draft search protocol
	   – The question and choosing parameters (steering committee choice & survey priority)

1:50-2:00pm	Next Steps

Jon asks group to approve minutes for 1st meeting. Group briefly discusses terminology "municipal" vs. "community" water supplies. Concludes that "community water system" and/or "community water supplies" best describes focus and scope of T2T project.

Group seems to agree that T2T project should adopt/use definition from Safe Drinking Water Act (SDWA).

Jeff harvested this; 3/20/2018 from EPA webpage "Information about Public Water Systems":
https://www.epa.gov/dwreginfo/information-about-public-water-systems
***Community Water System (CWS)**: A public water system that supplies water to the same population year-round.*

Mike CL: Ownership of watersheds that supply drinking water is an important consideration.

Brian: Scale is also important.

Josh: Scale varies greatly. In larger systems drawing from lower in the drainage (i.e. from rivers) the "watershed" is essentially a reach of river, from one community's intake to the next. In contrast, in the coastal zone, there is generally one intake per body of water or drainage.

Group discusses potential for some case studies [to illustrate range of different scales and associated issues.] In larger systems, there are many more uses going on. If we are focusing on just forestry uses, we might want to focus on smaller systems.

Jon suggests defining case studies later (e.g. April meeting). Consider doing one each for coast, Willamette Valley, east side of Cascades.

Group moves on to discussion/review of community water provider survey..

Casey notes that surveys obtain a certain kind of information; generally not as nuanced or open ended as interviews.

Cathy: Some systems pull water from multiple sources or from surface water only in emergencies. How are we going to handle those instances?

Casey suggests that we should still include them. Most systems have just one source. Multi-source systems are a small subset. **Jon:** Biggest we've seen has 3 source areas. Survey questions are per source.

Emily gives a few details and clarifications about survey questions.

Jon: Our understanding is that there are is a wide range of uses in different source watersheds. We want to get a better idea of what those are (Q4).

Mike CO: Some people might not know all uses. We should clarify the question to reflect this.

Emily: Section C asks about management, actors, partners, owners in the watershed.
Mike CO, Casey, Josh lead a back & forth about finding out how many systems have updated Source Water Assessments (SWAs). [OR] state is gradually adding updated SWAs; is about 25% done.

Mike CO: [Water providers] are also supposed to have Water Management Conservation Plans. About 300 connections are supposed to have one of these. Relevant questions include "Do you use it? How old is it? Who created it?"

EJ expresses concern that survey is "borderline too long".

Mary expresses concern about confounding which towns actually *use* their planning documents for management vs those who simply have one on file.

Mike CO suggests that some people might not complete the survey, might be too busy.

Josh: We need to somehow explain, get across why the survey matters.

Mike CL reiterates this point, suggests using a cover page to explain. **Group** seems to agree that we should have a clear and concise statement to articulate the purpose on a cover page to the survey; explanation of why it "matters"; appeal to broader interests.

EJ suggests cutting some questions. Need to focus on what is most important. **Lisa** follows up by saying yes, but we also need to make sure we gather the info we need.

Jon reviews some of the most important info needs.

Group discusses relationship & crosswalk between literature review and water provider survey. **Josh** suggests we focus survey questions on who actually uses their planning docs. DEQ can tell who has them and who doesn't. Also notes that systems with more staff/capacity are more likely to complete the survey and that this is a potential source of bias.

Mary submits that survey Qs 5 and 8 are too complicated, need to think hard about what is most important to ask about, what is most important to know.

Jon agrees that these are good contenders for reducing in complexity and/or taking out. But notes that these are relevant from his Forestry Extension POV. Extension would like to know how people get their information.

Marganne understands relationship between level of knowledge of plans and planning activities & effectiveness. Cites example of fish passage.

Group discusses shortening or eliminating Q5.

Brian asks about water treatment technology. **Josh** indicates he can provide details on this.

Ashley asks about Q15. **Jon** explains purpose & how it is structured, its rationale and value. This Q is our key crosswalk to the science review.
[Lunch break]

Jon: Which Qs are we most concerned about? Which ones can we axe?

Marganne: Rec Q is too complex. **Mary:** Why isn't it linked to level of concern? Thinks we could combine the "chart" questions.

Jon: Do we agree that Q8 is too complex? **Marganne:** What exact kind of info do we want regarding partnerships? (Q8)

Jon: Explains rationale for remaining questions. Asks about Q12. **Mary** thinks Q12 adds value. **Group** seems to agree. Q12 might shed light on "unregulated" contaminants under SDWA.

Ashley suggests way to make Q16 easier, by having respondents "rank" the items. **Mary** feels there is an "apples and oranges" issue here, i.e. some are management issues and some aren't.

EJ responds that they recognize that, but wanted input from respondents. **Mary** still has concerns. Group discusses how to link Qs 15, 16 and 17 to simplify, then moves quickly through rest of Qs.

Jeff leads discussion of initial findings RE themes and scope of literature. Key points…

- Searching is not limited to literature that specifically mentions drinking/municipal/community water. This is too specific and will miss a lot of relevant literature. Scope needs to include more general water quality lit, as long as there is some solid linkage to forest management.

- Lots of literature on turbidity and sediment issues, temporal and spatial patterns. Seems to be a general distinction between forest roads and other forest practices associated directly with harvesting.

- Quite a bit on "peak flows", seems to be a more objective term than "flooding". Recognition that higher flows contribute more sediment. Also effects on flow levels, and relationships to harvesting. Harvesting usually, but not always, increases flow levels. Notable exceptions, pertinent to Oregon Coast range and wet side forests, are areas with fog interception and drip.

- Quite a bit of discussion of BMPs, especially regarding roads and buffers.

- Forest chemical issues…we are mainly focusing on herbicides that are commonly used and applied over wide scales

- We are prioritizing literature focused on studies in the Pacific Northwest, and since 2000, especially for sediment/turbidity issues for which there is a large volume of literature. Might focus more broadly for other issues (e.g. forest herbicides), and/or include selected particularly strong papers/studies from other regions or internationally. We might also cite selected earlier work, mainly for context.

Jeff suggests that group really needs to think about the "wide vs deep" issue regarding scope of science literature review. Defends his use of 1st 50 "hits" as a minimum cutoff point for reviewing search returns, and argues that trying out a wider diversity of search terms is more productive than digging deeper into results for each search string. Discusses potentially wide scope of "rabbit trails", i.e. "related literature" in both Google Scholar searches, and links to individual papers on journal websites. Mentions that he and Jon will be meeting with OSU reference librarian to discuss additional search strategies.

Lisa interjects to reinforce "wide vs deep" issue, and articulates different options for the lit review:

1. A *systematic review* – if the review question is close ended, very targeted, and the literature is available – that incorporates SER electronic searches, gathering literature from the science panel and the steering committee, and traditional literature review search techniques;

2. A ***review/synthesis of the literature using selected systematic review techniques*** (a search and review protocol; documentation of how and where relevant literature is found, criteria for establishing relevance) for a few issues within a limited number of topics;

3. A ***traditional literature review/synthesis*** that updates the 2000 report.

Group discusses and seems to reiterate commitment to focusing on 1) turbidity/sediment, 2) quantity issues; summer low flows, 3) forest chemicals (primarily herbicides applied as site prep, prior to re-planting), and 4) "Disinfection byproducts" (DBPs).

AT THIS TIME, THE OBJECTIVE OF THE SCIENCE LITERATURE REVIEW PORTION OF THE T2T PROJECT IS ASSUMED TO BE CONSISTENT WITH OPTION 2, ABOVE.

Jeff suggests that we might try to carve off the topic(s) of wildfire-climate change interactions, related forest practices (fuels treatments, salvage logging) and their potential impacts on community water with a fairly concise technical summary of current thinking, but that this would not be a primary focus of the review, nor subject to an exhaustive literature search. *[Group seems wary of the complexity of these issues, but we did not appear to reach a consensus on this.]*

Jeff solicits additional input on keywords. Suggests that we cast a wide net in searching and sourcing potentially relevant literature. I.e. augment systematic searching with traditional search methods. We should definitely try to be objective and thorough, and track where each piece of literature was found, but not worry too much about whether individuals with particular policy positions contribute literature. Suggests we should rely primarily on the expert science reviewers to assess credibility of various pieces of evidence, based on study design, replications, rigor of analysis, etc.

Group seems to agree that we should focus primarily on peer-reviewed literature, but that agency reports such as USFS GTRs, USGS water reports, water agency reports, etc. should also be considered.

Brian suggests Grant et al. 2008 GTR as a starting point then go from there. [Jeff already has this GTR.] Also suggests doing some searches using "BMPs" or best management practices.

Mary asks why "water quality" wasn't used as a search term. **Jeff** explains that he thought this was too general, and implicit in more specific search terms used. But will try this term in some searches.

Marganne expresses some concerns about potential inclusion of policy oriented literature. Why would we do this in a science review? Asks for an example. **Jeff** explains that he wanted to leave the door open for consideration and possible inclusion of particularly strong or relevant documents that inform the science discussion and place it in context, help to flesh out understanding of science issues at hand. These would be considered on a "case by case" basis.

Cites discussion of making regulations for buffer widths more flexible to account for different contexts and conditions as one example.

Group discusses date of April 15th as deadline for submitting new material or keywords.

Jon moves to discussion of scheduling additional meetings.