

SMC Annual Fall Meeting
September 9-10, 2015
Victoria B.C. Canada

ATTENDEES

This year's business meeting and field trip were held at the Pacific Forestry Centre, Victoria BC beginning at 9:00 AM. Listed below are the 41 attendees from 21 organizations attending the business meeting on the 9th and/or the field trip on the 10th. Judi Beck, Director General, Pacific Forestry Centre opened the meeting at 9:00 am welcoming attendees followed by Candace Cahill, 2015 Policy Committee Chair giving an informal overview of the 2-day meeting. Page 9, Addendum A: Agenda

SMC Director Greg Ettl will be on sabbatical from September 2015-June 2016; Eric Turnblom will be the Interim Director in his absence.

ORGANIZATION	REPRESENTATIVE(S)
B.C. Ministry of Forests, FLNR	Dave Goldie, Jim Goudie, Monty Locke, Louise de Montigny
Cascade Timber	John Jayne
Green Crow	Harry Bell, Jenny Knoth
Hancock Forest Management	Florian Deisenhofer
Olympic Resource Management	Ryan Schlecht
Oregon Department of Forestry	Tod Haren
Oregon State University	Doug Maguire, Doug Mainwaring, Henry Rodman, Joo Sukhyun
Plum Creek Timber Co.	Mic Holmes, Brian Schlaefli
Port Blakely Tree Farms	Gareth Waugh
Quinault Indian Nation	John Mitchell, Jim Plampin
Rayonier Forest Resources	Candace Cahill, John Paul McTague
Roseburg Forest Products	Mark Wall, Tony Powell
Sierra Pacific Industries	Josh Misenar
TimberWest Forest Corp.	Shawn McLennan
University of Washington	Jason Cross, Rob Harrison, Maureen Kennedy, Megan O'Shea, Eric Turnblom
University of BC	Geoff Quinn
NRC Canada	Cosmin Filipescu, Ross Koppenaar, Al Mitchell (ret), John Vallentepd
USFS PNW RS	Eini Lowell
WA DNR	Ralph Johnson
Weyerhaeuser Company	Greg Johnson, Scott Holub, Dave Marshall
Consultant	Nick Smith

ACCOMPLISHMENTS

Field Data: We completed all field work planned for the 14/15 season and distributed data cd to members in August. During the 2014-2015 field season Bob Gonyea and Bert Hasselberg completed the following measurements:

Type I's: 12 full measurements, 7 RD checks, 4 plots marked for thinning. Type II's: 3 full measurements, Type III's, 6 full measurements, 5 plots measured and marked for thinning, Type IV's, (None, NWTIC's turn). Type V's: 20 full measurements, 2 plots dropped (Weikswoods Flat and Weikswoods Slope. Page 11, Addendum B: 2014-2015 SMC fieldwork schedules.

Jason Cross sent the Data Dictionary out to members this past summer and continues his work on creating a database that is query-friendly at different levels of data resolution.

NSF-CAFS: Phase II proposal were submitted and have been approved. Type V research will carry on if CAFS members continue to vote "yes."

Three SEFS Faculty attended the CAFS Annual Meeting held in Asheville, NC in August. Presentations included the final report for the "Impact of genetic gain, weed control and spacing on wood stiffness, density, and knot index in a large-plot trial of Coastal Douglas-fir: Turnblom et al." The continuation of "Understanding Site-Specific Factors Affecting the Nutrient Demands and Response to Fertilizer by Douglas-fir: Harrison et al." Two new project proposals: "Appraising Rotation-age Tree and Stand Characteristics in a 1970's Decadal Cohort of Douglas-fir Plantations in the PNW: Turnblom et al.," and "Assessing impacts of Soil Parent Material, "Responsiveness," and N Fertilization on Stand and Tree Wood Properties in mid-rotation Coastal U.S. Douglas-fir Plantations using a paired-tree approach: Turnblom et al."

Other funding included: 1. I/UCRC FRP: Collaborative Proposal: Understanding and Modeling Competition Effects on Tree Growth and Stand Development Across Varying, Forest Types and Management Intensities, Burkhart, Weiskittel, Turnblom from NSF (\$66,542), 2. "Organic Retention" from NCASI, (\$20,000), 3. "Sustainable Biofuels," from USDA (\$56,233) and 4. "Biomass equations for coastal Douglas fir by stand density, age, relative dominance, and location." From McIntire-Stennis, (\$75,161).

Meetings: SMC meetings held in 2015 included two annual meetings, two Policy Advisory Committee (PAC) meetings (4-6-2015 for budget and research funding discussion, and 9-18-2015 for Greg Ettl's sabbatical and 2016 budget and research funding), an Installation Review (IRC) Committee meeting (1-13-2015 to plan sun-setting at rotation-aged installations), and a Joint TAC meeting (6-16-2015 to develop further the "sunsetting" SMC Type I installations protocol and the Late-Rotation Fertilization study).

Graduate Students: Degrees Completed: Luyi Li (MS 2015), Matt Norton (MS 2015). Active students: Kevin Ceder (PhD), Jason James (PhD), Stephani Michelsen-Correa (PhD) and Marcella Menegale (PhD); Christine Dietzen (PhD), Kiwoong Lee (PhD), John Kirby (MS). Incoming students: Cole Gross and Amelia Root.

SMC Research

- Evaluated impacts of intensive harvesting of branches and foliage on long-term productivity of coastal DF forests
- Assessment of wood properties in GGTIV trials completed
- Impact of soil parent material, N-fertilization & other site variables in Type V subset completed
- Developed "sunsetting" SMC Type I installations protocol through joint TAC meetings
- Sampled soil to 3 m at 16 sites and evaluated the long term effects of fertilization on soil C, N, and pH.
- Evaluating the long term effects of thinning and fertilization treatments on soil carbon, nitrogen, and pH to a depth of at least 1 m.
- Evaluated the long-term impacts of vegetation control and excess biomass removal treatments on soil carbon to a depth of 3 meters.
- Tree List Generation Database now has four configurations

- Solicited and Reviewed Competitive Proposals (* indicates funded proposals)
 - *SMC Type I sunsetting protocol
 - *2nd-generation realized genetic gain trial for western hemlock
 - *Stand and tree responses to late rotation fertilization
 - Assessing impacts of Soil Parent Material, "Responsiveness," and N-Fertilization on Stand and Tree Wood Properties in mid-rotation Coastal U.S. Douglas-fir Plantations using a paired-tree approach
 - Biomass equations for coastal Douglas-fir by stand density, age, relative dominance, and location.
 - Estimates of bole and crown sizes of Douglas-fir at specified tree-to- tree spacings and size trends over time
 - The Paired-tree Extension: Adding fixed-area plots to expand the results of the paired-tree study
 - Refit of the SMC Douglas-fir Plantation Site Curves

BUDGET

Our recent award for NSF-CAFS Phase II funding means that our overhead will be reduced from 26% to 8% for the 5 years that we are funded under CAFS (option to apply for Phase III for total of 10 years). This will give us an additional \$50,000/y that we can spend on research. Institutional Funding totaled \$325,052. The BC Ministry of Forests Research Branch contributed \$68,000 to support measurement and treatment costs associated with SMC Installations in BC, UW faculty salaries (state support tied to mentoring SMC-based student research) \$100,000, student TA support together with funding from the Gessel Fellowship (\$33,630/student) reached approximately \$157,052 this year.

We have lost West Fork Timber (but acreage now under SPI), we had a loss of 139,635 acres from Campbell Global but added Lewis and Clark Tree Farm who bought the acreage. We approved 3 research projects at the Spring Meeting:

- Sunsetting of Type I Installation 722 has begun (\$121,650 committed)
- 2nd Generation western hemlock Trials approved (y1: \$3750, y2: \$17,515, y3: \$17,400, y4: \$13,000--\$51,665 committed)
- Late rotation fertilization project approved: budget evolving (\$26,685 over two years is committed)

We will not be taking contract measurements as Bob has agreed to train a new crew next year.

2015 Budget Projection:

- Anticipated Revenue from Dues: \$638,329
- We carried in \$200,000 therefore \$838,329 is available
 - \$20K NCASI additional through 2015
 - Bioenergy grant from USDA, \$56,233K to SMC (2011-2015)
 - \$75,161 McIntire-Stennis
- Projected Expenses: \$514,670 for salaries, travel, and overhead
 - Does not include new field crew member's salary
 - 3% average salary raises for employees
- Project Costs \$200,000, (these project costs are considered committed funds for funded proposals)
- Projected Carryover \$123,659

2016 Budget Projection:

- Anticipated Revenue from Dues: \$643,720
- Projected Carryover into 2016 (minimum) \$123,659 therefore \$767,379 available
 - \$20K NCASI additional through 2016
- Projected Expenses: \$623,732 for salaries, travel, and overhead
- Projected carryover of \$143,646 for 2017

A motion was made to keep SMC dues the same for 2016, motion accepted by a vote of 14 in favor and 0 opposed. Members will monitor the progress on the sunseting and 2nd generation hemlock projects through the fall and continue discussions of the later fertilization proposal at the January 12th TAC meeting. Pending availability, the meeting will take place at Port Blakely Tree Farms Tumwater office, thank you to Garet Waugh for offering to host the meeting. Likewise mark your calendar for the SMC Annual Spring Meeting slated for April 19th in Vancouver WA., location TBD.

TECHNICAL SESSION: SMC ONGOING RESEARCH

DISCUSSION OF LATE FERTILIZATION PROJECT: ROB HARRISON

Inherent risks to fertilization include high cost, and amortization of its costs to rotation, loss of volume from competition-induced mortality, and the potential of stand damage or loss due to fire, insects and diseases. An alternative strategy that could be economically attractive and may reduce these risks is to apply a single fertilizer application five to ten years before final harvest. Prior research did not point to a “driver” to validate site-specific responsiveness other than a “yes” or “no” to the question does it respond. The objectives of this project are threefold:

- To determine the average regional area-based volume response to late-rotation fertilization;
- Provide data for members to determine economic returns of late-rotation fertilization investments;
- If possible w/out compromising goals, to validate site-specific responsiveness predictions of the current model developed from Type V sites

Stand criteria, selection and procedures were discussed at length. Original plot procedure looked at starting with four temporary, 0.5-acre (0.2 ha) circular plots established w/ 33 ft. (10 m) buffer and then selecting two most “similar” plots for the pair, one plot in the pair randomly selected to be fertilized. An alternate plot procedure would start with four to six, 0.20-acre (0.08 ha) square plots established w/ 33 ft. (10 m) buffer, “match up two to three” pairs pre-treatment, randomly choose one in each pair to fertilize. The finale plot procedure discussed would start with with 2-plots (1-treated, 1-non treated) which would give less variability between plots and a better regional inference. Comments centered on costs associated with the first two procedures, questioning how important location might be, replication on site may get better but maybe not. Regional would require more plots in different areas and produce a better “mean” average. The members decided on the original design, four temporary, 0.5-acre 4-plots, then two most similar plots, one randomly selected for fertilization (for at least 8-years). Timeline: winter 2015 scope out sites, summer 2016 install first set of ten, spring and winter 2017 measure and fertilize.

YIELD PERFORMANCE OF SMC TYPE I, II AND III INSTALLATIONS (SMC)² ANALYSIS: WHERE DID WE LEAVE THINGS? MAUREEN KENNEDY

Analysis goals:

- Yield predictions with varying Initial TPA
- Yield predictions with varying SI30
- Predict yield using Chapman-Richards
- Test differences in yield curves with site characteristics
- Estimate models separately for Type III and for Type I/II combined

At the annual spring meeting members voiced concern about validity of apparent crossover in BA asymptote with increasing ISPA and whether model selection was finding true effects, or was overfitting (statistical inference).

Adoption of a bootstrap resampling method into the model selection process allowed empirical calculation of coefficient standard errors. This added statistical rigor enabled elimination of coefficients lacking statistical significance and resulted in a more statistically defensible model selection process. Adding ISPA² as an explanatory variable improved the fit for some responses. The overall outcome was a robust inference for difficult models but there is still a need to verify patterns in predicted asymptotes with relatively short time series.

PCT ANALYSIS UPDATE: JASON CROSS, ERIC TURNBLOM

Eric and Jason have been working with SMC Type I and Type III data to develop a better understanding how stands with given characteristics could be most profitably managed for the mix of materials that might be produced and the impacts of timing / intensity of PCT. At the 2014 fall meeting Eric presented response updates using existing SMC Type I data (QMD & CVT per acre yield), at the 2015 spring meeting updates included major determinants affecting accumulation of Type I installations BF 4", independent variables used included ISPA, percent stems retained (PRT), SI30, Elev, Tot. Age, Age at PCT, Latitude, Longitude and their interactions and a flexible function, the generalized allometric equation was chosen for analysis and modeling some responses to PCT. At present progress is being made delivering stand / stock tables and linkages to Plantation Yield Calculator (PYC), they will continue looking at modeling response variables, extant wood quality models (knot index) and provide a comparison between how well the assumptions made in setting up Type I installations are supported by Type III results.

GETTING SMC PLANTATION YIELD CALCULATOR TALKING TO SMC TREE LIST GENERATOR: JASON CROSS

At the annual spring meeting Jason brought members up-to date on what the Tree List Generator could and couldn't do, in the discussion that followed members indicated they would like to run the Tree List Generator with their formulas, no headers just tree variables with a web based route using Python or R based to move to ORGANON.

Currently Jason has been working with SMC's 2014/2015's field data getting the Yield Calculator–Tree List Generator–ORGANON to talk to each other. He pointed out his on-line demo used "model parameters" explaining how members could model trees at a particular age (as an example) then plug into ORGANON or FVS. This would be best served live on the web to tap directly into SMC's current database and could be password and IP protected. As this is an on-going process, all comments appreciated, send to crossco@uw.edu

IMPACT OF GENETIC GAIN, WEED CONTROL AND SPACING ON WOOD STIFFNESS, DENSITY AND KNOT INDEX IN A LARGE-PLOT TRIAL OF COASTAL DOUGLAS-FIR: ERIC TURNBLOM

Several factors are known to affect the key wood quality traits of knot size, stiffness, and density but the impact of various factors such as genetic selection for growth rate, tree spacing and intensive early weed control are not well understood. The objective of this joint project between SMC, NTIC and USFS PNW Research Station is to determine the extent of the impacts of these three factors on wood traits singly and in combination with each other; and with further monitoring, determine degree to which early measurement can predict future wood quality.

Using 2012 data collected on two of three jointly-run NWTIC Genetic Gain / SMC Type IV (GGTIV) trials planted in 2005 and 2013 data from two of three trials planted in 2006 we determined relationships between controlled experimental factors (genetic gain, spacing, weeding) on key wood properties (AV, R, SG) and their relationship between key growth and routinely measured stem form variables (DBH, height, LCR, volume). Modest relationships between average resistance and specific gravity were found, R^2 values between family mean SG and resistance varied with how resistance values were trimmed. Full Analysis of data nearly complete (expected 4th Quarter).

Findings will be summarized in an SMC Fact Sheet and submitted to peer-reviewed journal publication in 2016. We plan to re-assess many of these stem quality traits 4 or 8 years from now, when stands are 13 or 17 years from seed.

PROGRESS SUNSETTING SMC TYPE I INSTALLATION 722: EINI LOWEL

The measurement protocol for Sunsetting Type I Installations has been finalized. Treatments sampled will be 1-6 and 13-15 with a total of 9 plots. Treatments 7-12 will not be sampled. Details of the plan are available upon request.

THE EFFECTS OF SOIL PARENT MATERIAL AND NITROGEN FERTILIZATION ON TREE GROWTH AND WOOD QUALITY OF DOUGLAS-FIR IN THE PACIFIC NORTHWEST: LUYI LI, MS THESIS, PRESENTER, ERIC TURNBLOM

Though a relationship between Specific Gravity dry weight/ green volume (SG) and lat/long has been observed, the direct link between Soil Parent Material (SPM) and key wood properties has not been tested nor established, whether or not site responsiveness to N-fertilization changes this relationship is unknown.

Objectives:

- Investigate how coastal Douglas-fir tree growth and wood quality are modified by:
 - Site characteristics – SPM
 - Silvicultural treatment – Nitrogen Fertilization

Other wood properties in addition to SG are of interest, two variables assessed: growth and quality, this presentation focused on quality. D and co-D Trees with similar DBHs were paired up, one in each pair was randomly assigned to be treated. DBH of control trees were examined and used as the basis for stratified random sampling to obtain sample trees – fixed intervals – defined as quartiles of the DBH distribution 1 pair from 0-25% lower end, 2 pairs from 25-50%, 2 pairs in 50-75%, and the last 1 pair acquired from 75-100% upper end. After 4-6 years treatment period at two sites trees were destructively sampled (trees felled, sawed woody blocks from breast height region disk, increment core samples at BH), trees on the remaining sites were non-destructively sampled for wood properties at breast height only.

Major results include finding: a strong correlation between non-destructive TreeSonic Acoustic Velocity and Log Resonance Acoustic Velocity; expensive felled-tree methods can be substituted or supplemented with Non-Destructive Evaluation Techniques in a cost effective way; ,as expected, the higher quality wood can be found in the butt log.

To refine the research, more replication of sites (very limited sub-sample of all Type V study sites used) within strata defined by site & environmental factors (variables were not targeted) would be desirable.

INDIVIDUAL TREE RESPONSES TO THINNING ON DF LOGS PLOTS: A FOUNDATION FOR SHAWNIGAN LAKE STOP ON FIELD TRIP: DOUG MAGUIRE

The Shawnigan Lake LOGS study trials started in 1970 at BH age 16 and total age 25 (thinning and fertilization trails 1971-1972) as part of part of the Douglas-fir LOGS study begun in 1961. Object being to improve prediction of treatment response by understanding the processes driving growth by looking at direct response of individual trees to thinning.

Context and challenges included:

- Multiplier for direct response to thinning is required to predict individual tree growth accurately (residual stand density and initial trees size are not sufficient)
- Multipliers for ORGANON have been developed by determining an average ratio of observed to model-predicted growth on stand level
 - Should multipliers for direct growth effects be computed and applied at stand or tree level?
 - How different will resulting stand dynamics and growth and yield predictions be for these alternative approaches?
- Results from Black Rock suggest that growth multipliers may vary by initial tree size
- Do the Douglas-fir LOGS plots show similar differential responses by crown class or relative social position?
 - Objective in crown thinning was to release trees in all crown classes by removing selected dominant and codominant trees

- Crown classes seem to respond differently to differing thinning types (as well as intensity)
 - Crown thinning resulted in lower growth
 - Intermediates on coast site grew better under low thinning than control.
 - Suppressed trees did poorly on both low and crown thinning.
- Most growth per acre in dominant and codominant crown classes
 - Importance of leaving dominant and codominant trees for stand growth

As of 2014, all nine LOGS installations had received all five treatments originally planned and had grown through subsequent growth period with no loss of plots. Curtis and Marshall (1998) published the 20-year result for all but two of the LOGS sites (Stampede Creek and Shawnigan Lake) and therefore offer comparisons of results from Shawnigan Lake to seven other installations that had progressed further as of 1986. Shawnigan Lake is of particular interest due to its low site class. In general, the installation shows very similar results compared to the findings of the other LOGS installations, but reflects the slower development expected on the lower site.

TECHNICAL SESSION

FOCUS ON BRITISH COLUMBIA

B.C. SMC SITES AND MEASUREMENTS AND B.C. SILVICULTURE STUDY HIGHLIGHTS: LOUISE DE MONTIGNY

Louise outlined some of the silviculture research in B.C. highlighting

1. The B.C. SMC installations
 - a. 13 installations
 - b. 112 plots
 - c. cost \$30 - \$60K/yr
2. Jurisdictional and geographic context for forest management in B.C.
 - a. Total area: 95 million hectares (235 million acres)
 - b. Forested: 57 million hectares (141 million acres)
 - c. Available for timber harvesting: 22 million hectares (54 million acres)
 - d. Annual area harvested: about 200,000 hectares (494,209 ac)
3. FLNRO's Research Program
 - a. Improved and enhanced inventory: 10-year strategic plan to invest \$8 million per year
4. Timber supply implications of Mountain Pine Beetle (MPB) infestation
 - a. BCs cumulative loss to MPB (estimated at 770 million m³)
5. Timber supply mitigation strategies and need for silviculture research
 - a. Improving information on what we have
 - i. more photo acquisition
 - ii. adopting innovations in remote sensing: more use of LIDAR, LANDSAT imagery, automated image analyses
 - iii. more ground sampling and monitoring of young stands, residual structure and understorey trees
 - iv. revisiting beetle-affected PSPs
 - v. faster harvest and mortality updates
 - b. Improving Understanding of How Disturbed Stands Will Grow
 - i. Variable Density Yield Projection (VDYP)
 - ii. TASS III
 - c. Best practices for reforesting impacted stands

The most immediate concern for the forestry sector post-MPB is how to create and maintain a mid-term timber supply to span the time period from the boom of MPB-killed pine and the future crop of merchantable timber.

The Forests for Tomorrow program (FFT) was established by the Province of B.C. in 2005 to respond to the mountain pine beetle epidemic and catastrophic wildfires that occurred in the southern and central interior. FFT is aimed at improving the future timber supply and addressing risks to other forest values through the re-establishment of young forests on land that would otherwise remain under-productive and is also focused on mitigating impacts on mid-term timber supply caused by catastrophic disturbance in the interior or constrained timber on coastal, northwest, and southeast areas of the province through a program of stand treatments such as fertilization and spacing.

Since its inception in 2005, FFT will have invested about \$385 million to survey 1.8 million hectares and site prep'd and planted 137,000 hectares with 174 million seedlings.

Research: mostly genetics to enhance, maintain and conserve forest genetic resources that maintain or enhance timber supply and site productivity.

- *Climate based seed transfer* - rules and deployment tools for reforestation in a changing climate.
- *Breeding*- for improved growth and disease resistance.
- Enhanced seed orchard seed production and reduction of seedling losses in nurseries and plantations

OVERVIEW OF THE BRAND NEW TASS III: JIM GOUDIE, B.C.

Jim presented background and example applications for the Tree And Stand Simulator (TASS), a computer simulation model for complex forest stands, Jim pointed out this year is the 50th anniversary of the first data collection for TASS.

TASS III 1996-present modifications

- Three-dimensional crown modelling and light model (tRAYci)
- Crown profiles, Crown competition and Mortality
- TASS graphical user interface
- SYLVER

WOOD QUALITY RESEARCH IN B.C.: COSMIN FILIPESCU

Cosmin gave a very brief overview of Canadian Forest Service B.C. research

- Late rotation fertilization
 - Pilot project w/ TimberWest
- Mill study in progeny trial - Coastal Douglas-fir
 - Grow better trees faster – current and future timber supply
 - Focus on value and end-product
- Pest impact on value and wood quality
 - Screening of interior Douglas-fir for families resistant to multiple stressors (pests and climate)
 - Economic impact of pest management
- Levels-Of-Growing-Stock (LOGS)
- Shawnigan Lake thinning and fertilization

SMC 2016 RESEARCH PLAN OF ATTACK

1. Early winter TAC meeting
 - January 12th Tumwater, WA
2. Installation Review Committee, TBD
3. Spring meeting
 - a. April 19th, Vancouver, WA location TBD

Meeting adjourned at 4:30 with a reminder for tomorrow's field trip to Shawnigan Lake.

ADDENDUM A: AGENDA

STAND MANAGEMENT COOPERATIVE FALL MEETING & FIELD TRIPPacific Forestry Centre, 506 Burnside Rd W, Saanich, BC Canada

September 9-10, 2015

AGENDA DAY 1	
9 Sept	BUSINESS MEETING
8:30	Registration, coffee & rolls
9:00	Welcome to Pacific Forestry Centre Welcome & Introductions
	Judi Beck, Director General Candace Cahill, Policy Committee Chair
9:10	Accomplishments & Announcements 2015 at a Glance NSF CAFS update—funded projects Interim Director Status (September 2015-June 2016)
	Eric Turnblom
9:20	Director's Introductory Preface: SMC Budget and Research Policy Advisory Committee Meeting Budget Projection and Dues Vote Status and Progress of Measurement Crew Position
	Eric Turnblom
9:40	Discussion of Late Fertilization Project
	Rob Harrison
10:10	BREAK
	TECHNICAL SESSION SMC Ongoing Research
10:30	Yield Performance of SMC Type I, II, and III Installations (SMC) ² Analysis
	Maureen Kennedy
11:15	PCT Analysis
	Jason Cross, Eric Turnblom
11:35	Impact of genetic gain, weed control and spacing on wood stiffness, density, and knot index in a large-plot trial of Coastal Douglas-fir
	Eric Turnblom
12:00	LUNCH
	TECHNICAL SESSION SMC Ongoing Research
1:00	Individual tree responses to thinning on DG-LOGS plots: A foundation for Shawnigan Lake stop on field trip
	Doug Maguire
1:15	Deep soils bioenergy study
	Rob Harrison
1:35	Wood Quality SMC Paired-tree (Type V) trials
	Eric Turnblom
	TECHNICAL SESSION Focus on British Columbia
1:55	BC SMC sites and measurements and BC Silviculture study highlights Louise de Montigny
2:15	Overview of the brand new TASS 3
	Jim Goudie, BC
2:35	Wood quality research in BC
	Cosmin Filipescu
2:55	BREAK
3:15	Progress reporting and schedule for 722 Installation
	Eini Lowell
3:35	2016 Research Plan of attack 1. Early winter TAC meeting 2. Spring meeting date/location 3. Meeting Wrap-up
4:00	Adjourn
5:30	No-host social at the Canoe Brewpub

STAND MANAGEMENT COOPERATIVE FALL MEETING & FIELD TRIPDepart 8:00 [Harbour Towers Hotel](#)

SEPTEMBER 10, 2015

We will visit the Shawnigan Lake Research Forest where we will tour the thinning and fertilization trial (established 1971) and the LOGS Shawnigan installation (established 1970).

Victoria hosts (Louise and Cosmin) will arrange transportation (4x4 required). However, if you plan on driving a truck or 4x4 to Victoria and on the field trip please let Megan moshea@uw.edu or Louise Louise.demontigny@gov.bc.ca know to determine number of 4x4's required for the field trip.

10 Sept	AGENDA DAY 2	
	FIELD TRIP	
7:50	Introduction from Assistant Deputy	
8:00	Leave Harbour Towers Hotel – downtown Victoria	
9:00	Arrive Shawnigan Lake	
9:10	Introduction to Research Forest General Overview	Cosmin Filipescu, Canadian Forest Service
9:30	Physiology Research Lessons learned over 30+ years	Al Mitchell (ret.), Canadian Forest Service
10:30	Current Yield, Product, Value Does investing in silviculture pay?	Cosmin Filipescu, Canadian Forest Service
11:00	Wood Quality Research Should one care about quality?	Ross Koppenaar, Canadian Forest Service
11:30	Levels-of-Growing-Stock LOGS	David Marshall, Weyco and Doug Maguire, OSU
12:00	WORKING LUNCH	
	Remote Sensing Research Aerial LiDAR, Hyperspectral and Terrestrial-Lidar for Predicting Structure and Productivity	Geoff Quinn, University of Victoria
1:00	Leave to catch the 3:00 pm ferry with either BlackBall Coho Ferry to Port Angeles or BC Ferries Ferry to Vancouver, BC	
	Optional Hike	
2:00	Hike to Kinsol Trestle	
3:00	Travel back to Victoria	
4:00	Arrive Victoria	
Departs 6:45 pm	Clipper Ferry to Seattle (arrives 9:30)	
Departs hourly until 9:00 pm	BC Ferries Ferry to Vancouver, BC (1.5 hour ride)	
Departs 3:00 or 7:30 pm	BlackBall Coho Ferry to Port Angeles (2 hour ride)	

ADDENDUM B: 2014-2015 SMC FIELDWORK SCHEDULES

Type I					
Inst.	Name	Job	Date	Company	Comments
701	Mason Lake	Full Measurement	1/7/2014	Green Dia	Plot 4 RD , wait
702	Adam River	Full Measurement		BC	
703	Longbell Road	Full Measurement	2/12/2015	DNR	Plot 10 RD 54.3, wait
705	East Twin Creek	RD check	1/9/2014	Hancock	Plot 3 RD 55.7, marked
713	Saulk Mt.	RD check	11/12/2014	Grady lake	Plot 10 RD 51.6, wait
715	Davie River	RD check	1/1/2015	BC	RD check plot 6, Likely
716	Quilla Creek	RD check	1/1/2015	BC	RD check plot 3, likely
725	Sandy Shore	Full Measurement	1/27/2015	Olympic	
726	Toledo	Full Measurement	2/26/2015	Plum Cr	Plot 1 RD 51.3, marked, Plot 4 RD, Plot 6 RD Plot 9 RD
727	American Mill	Full Measurement	2/20/2015	Rayonier	
728	LaPush	Full Measurement	3/26/2015	Rayonier	Plot 5 RD 66.3, wait Plot 6 RD 68.9, wait
729	Gnat Creek	Full Measurement	2/3/2015	ODF	Plot 1 RD 55.2, mark, Plot 4 RD 53.2, wait, Plot 6 RD 46.9, wait
730	Big River	Full Measurement	1/29/2014	Campbell	
731	Dingle 4	Full Measurement	10/23/2014	USFS	Plot 4 RD 59.1, marked
732	100-Lens Creek	Full Measurement	1/1/2015	BC	RD check plot 7, likely
733	Stowe Creek	Full Measurement	1/1/2015	BC	
734	Upper Canada Creek	RD check	12/11/2014	Hampton	Plot 5 RD 53.4, wait
736	Twin Peaks	RD check	12/22/2014	Hancok	Plot 8 RD 55.2, marked Plot 12 RD 53.2, wait
737	Allegany	RD check	12/3/2014	ODF	Plot 2 RD 53.7, wait
Type II					
Inst.	Inst. Name	Job	Date	Company	Comments
802	Catt Creek	Full Measurement	11/13/2014	DNR	
810	J2 Nnaimo River	Full Measurement		BC	
812	Panther Creek	Full Measurement	12/9/2014	USFS	

Type III					
Inst.	Inst. Name	Job	Date	Company	Comments
915	Big Tree	Full Measurement	2/5/2015	Weyer	
922	Holder 1A	Full Measurement	4/9/2015	DNR	
930	Forks 1	Full Measurement	4/13/015	Rayonier	
931	Forks 2	Full Measurement	4/12/2015	Rayonier	
932	Forks 3	Full Measurement	4/10/2015	Rayonier	
942	Cat Ballew	Meas. Plots 10,11,12,14	4/8/2015	DNR	Thin Plots 10,11,12,18,24

Addendum B: 2014-2015 SMC Fieldwork Schedules (cont.)

Type V					
Inst.	Inst. Name	Job	Date	Company	Comments
827	Nestucca	Full Measurement	10/7/2014	Weyer	
828	Bunker Creek	Full Measurement	12/16/14	Weyer	
829	Grants Pass	Full Measurement	12/15/2014	Weyer	
830	Weikswoods Flat	Full Measurement	X	Weyer	Dropped
831	Rancho Ranchera PP	Full Measurement	10/1/2014	Plum creek	
832	Clarke Creek PP	Full Measurement	9/30/2014	Plum creek	
833	Clarke Creek DF	Full Measurement	9/3-/14	Plum creek	
834	Dudley	Full Measurement	10/1/2014	Plum creek	
835	Weikswoods Slope	Full Measurement	X	Weyer	Dropped
836	Rabbit Creek	Full Measurement	1/17/2014	Green Dia	
837	Mill Creek #2	Full Measurement	12/19/2014	Green Dia	
838	Star Lake	Full Measurement	12/17/2014	Green Dia	
839	Russel Ranch	Full Measurement	11/24/2014	DNR	
840	Coyote Ridge	Full Measurement	11/25/2014	DNR	
841	Cascadia Tree Farm	Full Measurement	12/10/2014	Cascade TC	
842	Scott Mountain	Full Measurement	12/10/2014	Cascade TC	
843	DeVore Mountain	Full Measurement	12/4/2014	Lone Rock	
844	Brush Creek	Full Measurement	12/4/2014	Lone Rock	
845	Hanes Ranch	Full Measurement	12/4/2014	Roseburg	

Type V.					
Inst.	Inst. Name	Job	Date	Company	Comments
846	Armstron-Janicki	Full Measurement	11/26/2014	Pilchuck	
847	Victoria	Full Measurement	11/25/2014	Pilchuck	
848	McKinely	Full Measurement	11/26/2014	Pilchuck	
849	Pender Harbor	Full Measurement	1/1/2015	BC	
850	Steel Creek	Full Measurement	1/1/2015	BC	
851	Upper Campbell	Full Measurement	1/1/2015	BC	
852	Fanny Bay	Full Measurement	1/1/2015	BC	
853	Copper Canyon 1	Full Measurement	1/1/2015	BC	
883	Alderbrook C.C.	Full Measurement	1/6/2015	Green Dia	
884	Carson Lake	Full Measurement	1/6/2015	Green Dia	
885	Stoner	Full Measurement	12/18/2014	Green Dia	
886	Beeville rd. South	Full Measurement	12/18/2014	Green Dia	
887	St. Helen's	Full Measurement	10/6/2014	Weyer	
888	Fall River Fertilization	Full Measurement	12/16/2014	Weyer	
889	Deadhorse	Full Measurement	10/7/2014	Weyer	
890	Ditch creek road	Full Measurement	10/2/2014	Hancock	
891	Red Hill	Full Measurement	10/2/2014	Roseburg	
892	Castle Rock	Full Measurement	12/2/2014	Weyer	
893	Frozen Creek	Full Measurement	12/2/2014	Roseburg	