

Minutes

Stand Management Cooperative Fall Meeting, September 23-24, 2009

ATTENDEES

Bureau of Land Management, Jeannette Griese; **Campbell Group**, Dave Hamlin, Dave Rumker ; **Forest Capital Partners**, Scott Ketchum; **Green Crow**, Harry Bell; **Green Diamond Resource Company**, Randall Greggs, Steve Loy; **Hancock Forest Management**, Dean Stuck; **Lone Rock Timber Co.**, Brian Nelson; **Olympic Resource Management**, Scott Holmen; **Oregon Department of Forestry**, Tod Haren; **Oregon State University**, Doug Maguire, Doug Mainwaring; **Plum Creek Timber Co.**, Steve Wickham, Steve Gavelle; **Port Blakely Tree Farms LP**, Jeff Madsen, Mike Warjone; **Quinault Indian Nation**, Jim Plampin; **Rayonier Forest Resources**, Candace Cahill; **Roseburg Forest Products**, Sean Garber; **Consultant**, Mel Scott; **Stimson Lumber Co**, Margaret Banks, Roger VanDyke; **TimberWest-Coast Timberlands**, Tim Crowder; **University of Washington**, Dave Briggs, Keven Ceder, Bob Gonyea, Rob Harrison, Bert Hasselberg, Rapeepan Kantavichai, Kim Littke, Megan O'Shea, Eric Turnblom, Rob Harrison, Guang Zheng; **USFS PNW RS**, Eini Lowell; **WA DNR**, Scott McLeod; **West Fork Timber CO**, Gene McCaul; **Weyerhaeuser Company**, Scott Holub, Greg Johnson, Dave Marshall.

The meeting held at the Little Creek Casino Resort, Kamilche, WA, began at 8:30 with the agenda in Appendix A; there were 41 attendees from 23 organizations. Policy Committee Chair Louise de Montigny was not able to attend so Vice-Chair Dave Rumker opened the meeting and welcomed the attendees. He noted that the budget discussion would be a key item of the meeting given the difficult economic times and stressed the need to balance current budgetary issues of members with the very successful long-term program of the SMC. It will be important to keep the ongoing field research/database on track and not lose critical highly skilled staff.

ACCOMPLISHMENTS

Dave Briggs reviewed accomplishments to date. A few highlights:

- Membership: Forest Systems has sold its lands and is no longer a member but Stimson Lumber Co., Forest Grove, OR became a member.
- The database update with 08/09 field data was delivered to members in mid-summer.
- 56 Type V paired tree fertilization installations have been established of which 53 have soil pits and environmental sensors; funding is from AGENDA 2020 and CAFS. Additional installations are being sought to fill gaps in coverage.
- GGTIV installations: The summer field crew completed site characterization of the three installations planted in 2005 so we have tree and competing vegetation data after the 2nd and 4th growing seasons for this group. All GGTIV installations now have the same environmental sensors that are being placed in the Type V installations.
- In addition to work on the GGTIV and Type V installations the summer field crew (Paul Footen, Kim Littke, Ryan Reith, Carol Shilling, and Gonzalo Thienel) completed vegetation/habitat assessments on 3 installations (21 plots), soil sampling (3 installations), and pitch moth surveys (11 plots).

- One graduate student completed and 9 graduate students in residence; all funded by external grants and UW Gessel Scholarships, the Corkery Family Chair, and teaching assistantships.
- 4 articles in print, 2 accepted, 10 in review
- NSF Center for Advanced Forest Systems. The UW proposal to join was accepted (\$70,000 per year for 5 years) and work is underway on three projects (1) additional support for environmental monitoring of the Type V installations, (2) support of basic research on use of terrestrial LiDAR to measure tree and crown characteristics and response to treatments, and (3) development of non-destructive techniques to measure and model wood specific gravity to estimate dry weight, carbon, and energy content of standing trees. An application for a \$7600 supplement for undergraduate research was also successful.
- BC Ministry of Forestry obtained a \$70k grant to support measurement of SMC installations in BC.
- NCASI will provide \$30-40K to support continued work at Fall River, Matlock, and Molalla.

ANNOUNCEMENTS

- NSF Center for Advanced Forest Systems meeting will be on April 27-29, 2010. We decided to hold the SMC Spring Meeting about 2 weeks prior to this date to review our projects and priorities in preparation for this meeting.
- The Fall 2010 meeting was briefly discussed with tentative plans to hold in at Oregon State University in mid-September.
- SMC 25th Anniversary. 2010 will mark the 25th year since the SMC began. The Strategic Planning Committee will begin to develop plans to commemorate this event.
- Director David Briggs announced that he plans to retire in 2013 and that the SMC should begin to discuss plans for a replacement.

NOMINATING COMMITTEE REPORT

The Fall 2009 meeting marked the end of Louise de Montigny's term as Chair of the Policy Committee and Dave Rumker, the current Vice-Chair will take over as Chair. At the Spring Meeting the Nominating Committee, composed of current and past Policy Committee Chairs, was asked to recommend nominees to become the next Vice Chair at this meeting. The committee report nominated Jeff Madsen. After asking for other nominations from the floor and receiving none, Margaret Banks moved (Candace Cahill seconded) that Jeff Madsen be elected next Vice Chair of the Policy Committee. The motion was approved unanimously.

BUDGET

Appendix B summarizes the 2009 budget with actual expenses through July and projections over the balance of the year. Without any payments of expenses from grants, the budget would have had a deficit of \$23,909. This is mainly due to inflation coupled with only two dues increases, 5% in 1997 and 5% in 2006. Placement of Director and Nutrition and Silviculture Project Leaders on the SMC budget starting with 1997 enabled them to focus on obtaining grants that have offset inflation and the need for dues increases. It should be noted that both dues increases

were associated with creating additional funds to support modeling development. However, with inflation pushing the deficit to higher levels and the economic crisis causing some members to announce that they would not be able to pay full dues in 2010, a finance committee was created and developed the following actions

1. We would not ask for a dues increase.
2. We laid off one of our two database management staff.
3. Summer salary for the Director was cut from 1.5 to 0.5 months and summer salaries for the Nutrition and Silviculture Project Leaders were cut from 2.5 to 2.0 months.
4. Salaries for the remaining staff were reduced by 7.7%.
5. We curtailed all other expenditures as much as possible.

These actions were implemented in July; actions 3 and 4 effectively meant a 2-week shut down for all personnel during the last half of 2009. The net effect of these changes and payment of some expenses from the CAFS grant changed the ending balance from the \$23,909 deficit to a projected surplus of nearly \$80,000. The intent was to create as large a balance as possible to buffer economic uncertainties affecting 2010 and 2011.

Using the 2009 projection the Finance Committee examined six scenarios for 2010 and their implications for 2011 (Appendix C). After review of these and the following motion was crafted

It is moved that

1. *The SMC invoice those who have indicated mandated dues cuts at their resultant dues amounts for 2010.*
2. *The SMC invoice all others at 80% of their full 2010 dues (a 20% cut).*
3. *That the SMC 2010 budget be managed to produce an ending balance of \$20,000.*
4. *That the Strategic Planning Committee examine concerns regarding restitution for unpaid dues and make recommendations for inclusion in the SMC By Laws.*
5. *That this vote is just for 2010 dues and budget management. The Finance Committee will assess the situation for 2011 as 2010 unfolds and develop a recommendation for the 2011 budget for vote at the Fall 2010 meeting.*

Randall Greggs moved that the SMC accept the motion (Sean Garber seconded) and it was accepted by a vote of 10 in favor and 7 opposed. It should be noted that the committee expressed strong concern that the budget be managed to have as little impact on the long-term program and highly skilled staff as possible.

STRATEGIC PLAN

- A. The following projects were identified under the current strategic plan
 1. A model validation study: a joint effort of the Modeling and Silviculture TAC's
 2. An analysis of performance of the Type I, II, and III installations in a "LOGS" style report: Silviculture TAC
 3. Development of criteria for "retirement" of SMC installations: Silviculture TAC as lead
 4. Create the paired-tree fertilization trials: Nutrition, Silviculture, and Wood Quality TAC's

Progress on these was presented during the Project Leader reports.

- B. The UW proposal to join the NAF I/UCRC Center for Advanced Forest Systems (CAFS) program was approved in February. As long as UW receives more than \$300k in a year from its industry supporters, it will receive \$70k in that year. To date UW has received \$70k for 2009 and \$70k for 2010. We are presently allocating CAFS funds to the following three projects
1. Understanding site specific factors affecting the nutrient demands and response to fertilization by Douglas-fir. (\$201 allocated in 2009 to set up paired tree installations and purchase and deploy environmental sensors).
 2. Remote sensing for measuring and monitoring the response of plantations to intensive management (\$20k allocated in 2009 for RA to field test terrestrial Lidar; \$7600 supplement from NSF for undergraduate research)
 3. Modeling the effects of intensive plantation silviculture on wood density, stiffness, knots and other properties (\$18k allocated in 2009 for assessing wood density and stiffness of trees with nondestructive methods)

These projects were reviewed in more detail during other portions of the program.

Modeling Project Report: Dave Marshall

- A. FVS <http://www.fs.fed.us/fmasc/> . Latest Release: September 2009 (PN variant)
- What's New
 - Economics Extension (Fred Martin, WA DNR)
 - carbon accounting tools
 - genetic modifier paper accepted to *Western J of Applied Forestry* (Peter Gould)
 - Current Work
 - FVS CLIMATE (version 0.1) is available for testing (contact Erin Smith-Mateja: eesmith@fs.fed.us)
- B. ORGANON <http://www.cof.orst.edu/cof/fr/research/organon/> Latest Release: Sept. 19, 2009 (Edition 8.4)
- Console and DLL (with revised call statements) versions
 - Genetic modifiers (Gould et al. 2009)
 - Swiss needle case modifiers (Maguire et al.)
 - New western hemlock diameter growth (SMC)
- C. Red Alder Plantation Modeling
- SMC built the data base
 - Hardwood Silviculture Coop (OSU)
 - FVS analysis 2008 (Erin Smith-Mateja: eesmith@fs.fed.us)
 - Top height/site index model published (FE&M)
 - ORGANON version status

- ✓ Equations Completed: Height/diameter, maximum crown width of open grown trees, largest crown width of stand grown trees, crown profile, height to crown base, diameter growth rate, height growth rate, crown recession rate
- ✓ Equations to be completed: Maximum size-density trajectory, mortality rate, thinning modifiers

D. CONIFERS

http://www.fs.fed.us/psw/programs/ecology_of_western_forests/projects/conifers/ Latest Release: January 2009

- Current Work
 - ✓ Resolving Windows Vista conflicts; contact Martin if you have problems (mritchie@fs.fed.us)
 - ✓ Nick Vaughn submitted SMC analysis to *Forest Science* (in review)
 - ✓ Discussing possible modifications with Doug Maguire from analysis of VMRC data (CIPS).

E. CURRENT Modeling Project Priorities

- Priority 1
 - ✓ Genetic modifiers in ORGANON (**completed**)
 - ✓ Completion of red alder analysis (**progressing**)
 - ✓ Collaborate with CIPS on process model proposal (**ongoing**)
 - ✓ Growth model evaluation (**Eric**)
- Priority 2
 - ✓ Work with wood quality TAC on wood quality modeling (?)
 - ✓ Update thinning and fertilization analysis (**2010?**)
- Priority 3 -- funding opportunities (**ongoing**)
 - ✓ Biofuel and biomass modeling
 - ✓ Climate and weather modeling

Nutrition Project Report: Rob Harrison

A. Carryover Study

- Paul Footen (M.S. student) found small but statistically significant differences in mean DBH and height after about the 5th year since planting, also understory differences
- Paul is completing understory/site characterization work, manuscript accepted for North American Forest Soils conference.
- Funding now primarily from TA/Gessel, sample analysis/travel paid from SMC

B. Fall River/Matlock/Molalla LTSPs

- Funding new \$40K 2008-2009 \$555K total, initial new NCASI funding for 2009-2010 \$30-40K, \$585-595K total.
- Brian Strahm (Ph.D.) now professor at Virginia Tech, wrote 2 pubs, SSSAJ and FEM pubs this year, North American Forest Soils Conf.
- New Ph.D. student Carol Shilling, TA/Gessel support, nearing completion of 5-year aboveground biomass and some root work at Matlock and Molalla LTSPs.

- C. Effects of urea fertilization on carbon sequestration in Douglas-fir plantations of the Pacific Northwest: Ben Shyrook is completing a Masters using Type I installations; presented during afternoon session.
 - D. Paired Tree: presently have 56; Kim Littke presented status in the afternoon session.
- E. Future
- Paul Footen returning for PhD, tentatively LTSP
 - New student Joy Liu from Taiwan
 - funding
 - ✓ current \$25K/yr Agenda 2020 for 3 years
 - ✓ \$40K/yr NCASI (2008-9), \$30K/yr (2009-10) continuing
 - ✓ Approx \$100K/y equiv. TA/Gessel fellowships

Silviculture Project Report: Eric Turnblom

- A. GGTIV Installations
 - Maintenance: Fences repaired as required, plot corners re-monumented as needed, complete vegetation control, 80% bare ground specification, included spraying relevant plots at all six installations (used atrazine and transline) and monitored germinants through June.
 - Measurement: the 2005 plantations received full measurements, summer vegetation surveys and habitat characterization (duff depth, vertical porosity, etc.)
- B. Type III Mixed Species installations
 - Pure and 50-50 mixtures of DF and WH in alternating rows; two replicates
 - Substitutive (replacement series) experiment (opposed to additive)
 - Planted with best quality seedlings available at the time (2-1 DF; 1-1 WH)
 - Mariano Amoroso analyzed the age 12 data for his MS thesis, now have age 18 data analyses underway.
- C. Reviewed plan for 2009/10 field season measurements
- D. Strategic Plan Projects
 1. Model Validation
 - Collaboration: Co-PIs are Greg Johnson, Dave Hamlin, David Marshall
 - Recent observations (Johnson) have shown models to exhibit differing effects of thinning, fertilization
 - Attempts to refine, restructure, hybridize empirical models would be well informed by identification of any knowledge gaps that may be causing differences in modeling treatment effects
 - Three phases
 - ✓ Identify criteria and indicators for sources of high quality data in concert with meta-analysis of available literature; Begin Identifying existing models for validation
 - ✓ Use criteria and indicators from 1) to search for data sets and obtain necessary agreements for data sharing; Finalize list of models to validate; Develop standard set of model runs
 - ✓ Perform model runs from 2) - analyze results

- Deliverable: Technical report delivered to model developers, data sharing agencies, SMC cooperators, collaborators
 - Financial support for one (1) GSA for 2.25 yr, computer & software, supplies and materials not to exceed \$34,200.
2. LOGS style performance summaries of Type I, II, and III installations
 - Growth & Yield analysis of standard variable set: DBH, Height, tree volume, stand volume, survival (TPA), size distributions
 - Technical report delivered to SMC cooperators, collaborators
 - Financial support for one (1) GSA for 1.5 yr, computer & software, supplies and materials not to exceed \$24,000.
 3. Criteria for retiring installations: Ideas that have been proposed were reviewed and will be discussed at a TAC meeting later this Fall.

E. Other projects

1. Vegetation Composition and Succession in Managed, Coastal Douglas-fir Ecosystems
 - Sponsored by NCASI, Kevin Ceder is working on this for his PhD)
 - Objectives
 - ✓ To develop overstory / understory relationships in young, managed Douglas-fir stands at the species level as affected by initial spacing and thinning
 - ✓ To benchmark the developed relationships against a small, independent vegetation data set
 - ✓ Testing extrapolative power of the models by comparing to observed data from differently treated stands (thinned and pruned) not used in model building.
2. Sun-Tree Identification in Tree Lists of Multi-Strata Stands
 - Sponsored by USFS, cooperating with OESF / ONRC
 - Conjecture: top level or uppermost stratum may “drive” size / density relationships, hence stand dynamics
 - Nick Vaughn is the grad student assistant, exploring various metrics for crown closure distribution, crown length distribution, etc.

Wood Quality Project Report: Eini Lowell

- A. Determining the effect of thinning, site quality and stand density on wood quality using non-destructive testing to develop predictive models (stiffness, wood density, dry weight-biomass, carbon, energy)
 - PNW Research Station, Canadian Forest Service (Wood Fibre Centre), and the SMC
 - Sample: 4 LOGS Installations (135 trees/installation); 3 treatments (thinning regimes and control); 3 plots per treatment; 15 trees per plot
 - Data collection: ST300 longitudinal acoustic, Fakopp microsecond timer (transverse acoustic), Resistograph, Pilodyn. Will get increment cores (x-ray densitometry) from sub-sample of trees
- B. SMC/CIPS Paired-Tree Fertilization Projects
 - Agenda 2020 (2008): Harrison, Maguire, Lowell, Briggs, Mainwaring, Turnblom, Littke

- Discussed additional site characterization and instrumentation to determine how key measures of wood quality are affected by site factors, stand conditions, management practices, and genetics
 - Technologies under investigation are nondestructive testing on the stems of the plot center trees and terrestrial lidar to estimate changes in branches and stem form
- C. Non-destructive evaluation of wood quality in standing Douglas-fir trees and logs
- Agenda 2020 (2004): Briggs, Lowell, Turnblom, Lippke, Carter
 - Integrated and edited database expected to be finished at end of 2009, analyses and papers will follow.
 - x-ray densitometer data from ends of each log received from Weyerhaeuser and is being analyzed by Rapeepan Kantavichai.
 - veneer modeling continues in cooperation with Christine Todoroki, Scion, New Zealand.

FOLLOW UP ACTIONS

1. Schedule the Spring 2010 meeting approximately mid-April to allow time to prepare for the CAFS meeting on April 27-29.
2. Each of the TAC's will be scheduling a meeting later this Fall. Two key items to discuss will be
 - a. review priorities for retaining field installations
 - b. changes in field installation measurement procedures
3. The Strategic Planning Committee will hold meetings to
 - a. Review and recommend priorities for discussion at the Spring meeting in preparation for the CAFS meeting in April 2010.
 - b. Discuss potential new strategic planning priorities.
 - c. Evaluate and recommend on suggestions concerning restitution for unpaid dues
 - d. Begin planning for the 25th anniversary of the SMC.
 - e. Begin discussions concerning closer coordination between CIPS, PFC, and SMC
 - f. Director Briggs indicated his plan to retire in 2013. The SMC should begin discussions with the UW administration concerning future leadership arrangements.
4. The Finance Committee will continue to monitor the budget as it unfolds in 2010.

TECHNICAL SESSION

These presentations can be downloaded from the SMC website (www.standmgt.org) and provided an excellent perspective the field tour visits on the following day.

Appendix A

STAND MANAGEMENT COOPERATIVE FALL MEETING Little Creek Casino Hotel Kamilche, WA. September 23-24, 2009

AGENDA	
23 Sept	BUSINESS MEETING
8:00	Registration. Coffee & Rolls
8:30	Welcome & Introductions
8:45	2009 Accomplishments, Announcements, etc.
8:55	Nominating Committee: Election of Policy Committee Vice-Chair
9:10	2009 Budget Status, 2010 Budget Projection
9:40	Strategic Plan Growth Model Validation Type I-III Performance UW NSF I/UCRC CAFS projects Other opportunities
10:20	Break
10:35	Nutrition Project Report Rob Harrison
10:55	Wood Quality Project Report: Eini Lowell
11:15	Modeling Project Report: David Marshall
11:35	Silviculture Project Report: Eric Turnblom
12:00	Lunch
TECHNICAL SESSION (under development)	
1:00	Age 5 response of the 3 GGTIV sites (Keith Jayawickrama, Eric Turnblom, Terrance Ye)
1:20	"Estimation of wood properties, stem biomass and stem weight of Douglas-fir in Pacific northwest" (R. Kantavichai and D. Briggs)
1:40	Paul Footen (not available – Rob to present)
2:00	"Predicting nitrogen fertilizer response in Douglas-fir" (Kim Littke)
2:20	"The effect of urea-fertilization on carbon sequestration in Douglas-fir plantations of the pacific northwest" (Ben Shyroch, not available – Rob to present)
2:40	Pure and mixed Douglas-fir and w. hemlock plantation production: Age 18 results (Turnblom)
3:00	Break
3:20	"Obtaining forest stand inventory parameter and volume from terrestrial LiDAR" Guang Zheng
3:40	"Who's in control here? The challenges of modeling understory vegetation in young stands" Kevin Ceder
4:00	Algorithmic Detection of Suntrees From Inventory Data (Turnblom, Vaughn)
4:20	Carol Shilling (not available – Rob to present) Comparison of aboveground biomass of 5-year old Douglas-fir (<i>Pseudotsuga menziessi</i> (Mirb.) Franco) and associated allometric biomass equations at three sites with varying temperature, precipitation, and soil composition.
4:40	
5:00	Adjourn
6:00	Dinner at Xinh's Clam and Oyster House, Shelton, WA
24 Sept	FIELD TRIP
7:30	Depart from Little Creek Casino for the Donkey Creek Genetic Gain/Type IV Installation: Travel time 45 min
8:30	Arrive at Donkey Creek
2:30	Adjourn & Return to Little Creek Casino

Appendix B: 2009 Budget

INTRODUCTION

Member Dues History

1. Annual dues of many members often change due to land transactions.
2. Some dropped out and returned (ex. Boise Cascade, Roseburg, Trillium).
3. Some disappeared due to mergers (ex. Willamette Industries).
4. Some scaled back (ex USFS in late 90's before dropping out entirely).
5. There have been no "equity" reductions by others when some have reduced for various reasons.
6. There have been no restitution fees for returning members.
7. New members join with no "buy-in" fee beyond regular dues calculation.
8. Many contribute various services not reflected in dues or in-kind credits.
9. Dues raised twice since 1996
 - in 1997 to complete ORGANON and cover membership losses
 - in 2004 (actually implemented in 2006); 5%

Budget Management

1. Prior to 1996
 - full time Director salary on SMC budget
 - no funds to Silviculture and Nutrition Project Leaders
2. 1997-Present
 - Director summer salary only
 - summer salary for Silviculture and Nutrition Project Leaders
 - Impact → Director and Project Leaders have raised grant and UW funding
 - support graduate students (no tuition and RA salaries are paid directly by SMC which does provide some travel and other support.
 - grants pay some SMC staff salaries and support expenses.
 - Graduate students: have been funded by grants, and UW (Corkery Family Chair, Gessel Scholarships, and TA'). Very rarely are salaries and tuition paid from the SMC. SMC mainly provides support in terms of supplies and travel to field sites to support research if not covered by a grant.
3. Inflation
 - Budget often has had a deficit → covered by grant buyouts.
 - Inflation is increasing the deficit → less likely to be covered by buyouts.
4. 2009-2011 Situation
 - Normal budget deficit + dues cuts requests by some members
 - Mid-2009 actions to balance budget
 - ✓ Eliminated one key staff member

- ✓ Placed remainder of faculty and staff on a 1-month shut-down basis (2 weeks in 2009)

2009 Budget Status

I. Dues formula

Approved Fall 2004; Started in 2006
If acres > 100,000, dues = \$12,274 + \$0.035675 Acres
If acres ≤ 100,000, dues = \$ 6,137 + \$0.035675 Acres
Dues cap = \$79,517

II. Financial Support

A. Funding from Landowner Members

1. Member dues
 - \$613,759
 - Forest Systems sold lands and is no longer a member.
 - Stimson Lumber Co. joined the SMC.
2. Adjustments
 - \$15,207 in-kind credits for maintenance of the 6 GGTIV installations during 2008.
 - Special contract income = \$2,983.
3. 2009 net contributions (dues + adjustments) = \$601,536
4. Operational funding (2009 net + 2008 balance).
 - 2008 balance = \$23,353
 - \$624,889 available for 2009 operation (Table 2).

B. Funding from Institutional Members

- ✓ Not much change expected from 2008. Includes BCMF Research Branch grant to measure SMC installations in 2009.

C. External Grants and Other Support: \$495,600.

External Grants: \$ Received in 2009			
Source	Amount	period	PI
NCASI (Fall River)	\$ -		Harrison
Gessel Fund (Ben Schyrock)	\$ 25,000	2009	Harrison
Corkery Family Chair	\$ 73,000	2009	Briggs
UWTA	\$ 40,000	2009	
NSF U/ICRC CAFS	\$ 350,000	2009-14	Briggs, Harrison, Moskal, Toth, Turnblom
NSF U/ICRC CAFS Undergrad Supplement	\$ 7,600	2009-10	Moskal, Briggs
Total	\$ 495,600		

III. Expenses (Actual through July plus projected July-December)

A. With no grant buyouts or other actions, right column would apply → \$23,909 deficit.

B. Buyouts and Cost Cutting Actions

1. Some staff salary, benefits, and costs built into CAFS projects (about \$36,700).
2. Travel expenses reduced by eliminating a vehicle and other travel savings.
3. Cost cutting actions implemented July 1, 2009 (anticipation of dues shortfall in 2010)
 - ✓ Eliminated one database staff position (John Haukaas) → will hurt database and analyses
 - ✓ Reduced staff from 100% to 92.3% (48/52); 2 weeks pay loss over last half of 2009
 - ✓ Reduced summer salaries of Director (from 1.5 to 0.5 mo) and project leaders (2.5 to 2.0 mo)
4. Ending balance changed from \$23,909 deficit to surplus of about \$80,000 to enter 2010; a savings of about \$104,000.

C. Student Support:

- ✓ travel, supplies, etc., somewhat reduced

Appendix C: 2010 Budget Projections

Definition of 2010 Scenarios

Dues Levels

Six members have indicated dollar or percentage reductions in their 2010 dues; for some the reduction may continue through 2011. In the attached dues calculation tables, these are all converted to percent changes. It is assumed that they are too far along in their budgeting process to change them.

In consultation with the SMC Finance Committee the following scenarios were developed for this report

1. Dues for all others kept at their full amounts
2. Dues for all others reduced by 20%
3. Dues for all others reduced by 25%
4. Dues for all others reduced by 30%

The Finance Committee also discussed and eliminated the following

5. Dues for all others reduced by 50%
 - Rejected since budget analyses show that this produces a 2010 deficit (\$2k) even with a 2 month shut-down and the deficit becomes much worse (\$66k) in 2011.
 - This is not sustainable.
 - PI is responsible to prevent occurrence of deficits.
 - UW will terminate project when a deficit appears.
 - Legally, the PI is personally liable for any residual deficit.
6. Drop membership of those who cannot pay full dues.
 - Rejected. Assuming only the present 6 members are dropped there would be a positive balance (\$27k) at the end of 2010 but 2011 will end with a deficit (\$26k).
 - However, if any others announce a reduction and we drop them, this quickly becomes worse than scenario 5.

Other issues

- Under scenarios 5 and 6 SMC could deliver very little to members which might stimulate some to cut dues or drop out.
- Once a member drops out it may be very difficult to justify rejoining to higher management.
- After dues are cut, it may be difficult to justify restoration of full dues in the future; management may view it as a dues increase rather than restoration. This may be a bigger problem with larger reductions and if they persist over a longer time frame.

Staffing Levels

Scenarios 1-4 were each examined for the staffing loads indicated in the following table

	Normal	1 month shut down	2 month shut down
Director	1.5 mo summer	0.5 mo	0.5 mo
Project Leaders¹	2.5 mo summer	1.5 mo	.5 mo
Staff²	100%	92.3% (48/52)	84.6% (44/52)
Graduate RA	None	None	None
Other	Supplies & travel for students becomes progressively less		

¹Harrison, Turnblom

² Collier, Gonyea, Hasselberg, O'Shea

Results of Scenarios 1-4

Scenario	Staff Level	2010	2011²
1. 0% decrease	normal	\$41	\$2
	1 mo	\$110	\$139
	2 mo	NA ¹	NA ¹
2. 20% decrease	normal	(\$20) ³	(\$119)
	1 mo	\$54	\$28
	2 mo	\$111	\$142
3. 25% decrease	normal	(\$35)	(\$149)
	1 mo	\$39	(\$2)
	2 mo	\$96	\$111
4. 30% decrease	normal	(\$50)	(\$180)
	1 mo	\$24	(\$33)
	2 mo	\$81	\$81

¹ Unnecessarily high

² Assuming same dues as in 2010 for each scenario; change is the effect of the balance forward from 2010

³ Values in () are negative

- Each scenario assumes that the balance from 2009 is \$80,000
- We examined the impact of each scenario on the 2010 ending balance and how it would impact 2011 assuming continuation of the same levels of dues and staffing.
- Budget does not include any buyouts on CAFS or other grants.
- BLM dues shown are equal to largest of others, balance under Special Contract Income.

- Assume zero in-kind credits on 2010 dues for 2009 maintenance of the 6 GGTIV installations. Assume no future maintenance is needed.
- Special contract income is assumed to be zero.
- The balance of BLM's \$80k contract is shown as Special Contract Income.
- Detailed tables for 2010 are shown on pages 5-19.

Comments

1. Scenarios are illustrative; an individual member may elect to pay full dues regardless while others who have not completed their budgeting may find that they must differ from the amounts presently indicated.

2. Other scenarios are possible, either different dues reduction or different levels of staff loading (ex 0.5, 1.5, 2.5 mo shut-downs).

3. Impacts
 - a. Student Support
 - With rare exceptions graduate students have not been funded using SMC member dues. Instead they are supported by grants and UW sources (Corkery Family Chair, Gessel Scholarships, TA's).
 - SMC support is mainly in the form of supplies, equipment, and travel for field research that is not covered by these other sources. As the budget is reduced the ability to provide these resources for graduate students to conduct their research will decline.
 - Briggs' Corkery Family Chair term end June 30, 2010; will apply for renewal. Loss of Corkery will reduce RA support, hinder recruitment of top students, and likely eliminate summer student field crew; a mix of graduate and undergraduate students.

 - b. Summer work.
 - Summer student field crew is unlikely unless Corkery is renewed or new grants appear. No vegetation surveys, soil samples, etc.
 - Scheduled maintenance and other needs, noted for installations during the regular field season and deferred to summer, will be reduced as place regular staff on longer shut-downs.
 - We will create a backlog of work and forfeit important data that can only be collected in summer.

 - c. Faculty and Staff
 - Faculty will seek other summer funding, may hurt grants relevant to SMC.

- May see attrition of experienced staff.
- d. CAFS impact
- Reduced dues may place UW below the threshold to receive the \$70,000 funding level from NSF's CAFS program; will be at \$50,000 level. This further erodes student and staff buyout options.

Vote

We will vote on what course to pursue for 2010, re-analyze 2011 as more information becomes available during 2010, and vote on action for 2011 at the Fall Meeting in 2010.