

SWCC Monitoring Committee
Meeting Notes
November 9, 2011

Present: Megan Birzell*, Travis Belote*, Anne Carlson*, Shannon Connolly, Cameron Thomas*, Beth Gardner*, Bruce Rieman*, Gary Burnett*, Joe Kerkvliet*, Cory Davis*, Keith Stockmann*, Gunnar Carnwath*, Scott Tomson*, John Ingebretson*, Cathy Stewart*, Beth Hahn*, Renate Bush*

**Indicates voting member.*

Action Items:

- **Cory** will send the Forest For Every Classroom application to one person in each district for them to forward it on as they see fit.
- **Cory** will send out FY2012 table and ask working groups to narrow down what they want to consider for funding in 2012 and come up with an estimated budget by the January meeting.
- **Cory** will add an Introduction section under each objective in the TOC to allow each group to explain how the proposed monitoring links back to the FLRA.
- **Aquatics and Socioeconomics groups** will put their presentations in a Word document with as much detail as possible and send to Cory to forward to the full committee for review.
- **Fuels / Vegetation and Wildlife working groups** will prepare presentations of their sections of the long-term plan for the next monitoring meeting.
- **Cory** will suggest that a discussion of wood products monitoring be added to the next full collaborative meeting agenda.

I. Welcome/Introductions/Updates

- a. Follow-up, review Action Items, and approve notes from Oct 19 meeting
 - i. Action items from the previous meeting were reviewed and all were completed.
 - ii. The notes from the October 19, 2011 were approved unanimously.
- b. FY2011 project timelines
 - i. Cory sent out a project timeline to each FY2011 monitoring project lead. It includes a table to fill in the key steps to be accomplished including dates and deliverables. The leads were asked to return the timelines to Cory or the Chairs by the end of November.
- c. Citizen science: "Forest for Every Classroom"
 - i. Melissa Hayes from MFRC forwarded the application to Cory for the Forest Service program to encourage teachers from the SWCC to apply.

- ii. The program provides field experiences and encourages local teachers at all levels to develop a curriculum that gets students out into the forest.
 - iii. The monitoring committee needs to encourage more citizen and student involvement in monitoring projects. We need to keep this in mind for all of our monitoring projects and Cory will be emphasizing this starting with the 2012 field season.
 - iv. Teachers need to apply for the program and it is essentially free.
 - v. Are there teachers we might approach to get them involved in this program?
 - vi. John – we’re probably already using kids in the Swan and just not recognizing it as part of the SWCC effort. Diane Erickson at SEC is contact for that work.
 - vii. Mary Stone and Patti Bartlett in Seeley Lake may be good contacts, as is the Clearwater Resource Council. CRC is already doing work with Seeley schools and trying to see how relevant that can be to CFLRP.
 - viii. Good representation in Seeley and Swan already. Nancy Schwalm Education coordinator for the Blackfoot Challenge is currently going through the program.
 - ix. It is a long-term commitment because the teachers go through a year of training before a curriculum is ever developed.
 - x. ACTION ITEM: Cory will send this application to one person in each district for them to forward it on as they see fit.
 - d. Everyone interested in being a voting member should review the revised charter online and sign and send their COI statement to Cory or the chairs if they have not already done so.
 - i. We may make more changes to the charter based on changes happening with the SWCC charter.
- II. Develop list of potential FY2012 monitoring projects
 - a. Reviewed where the committee is in terms of the timeline previously developed for FY2012 projects and long-term plan.
 - b. Reviewed a table of initial projects identified by each working group to be considered for FY2012. Completed table during meeting based on input from members of each working group:
 - c. Aquatics:
 - i. GRAIP (continuing): initially funded in FY2011 but unable to complete agreement.
 - ii. NETMAP (continuing) next steps are to expand the coverage. Regional office is talking about expanding it region-wide. \$70k to expand to SWCC, \$200k to expand across R1.
 - 1. Have draft report from NETMAP workshop that they’ll share once finalized.

- iii. Cutthroat genetic sampling (continuing): complete sampling on streams not sampled in 2011.
 - iv. PIBO (potential new project): funded through GNLCC in 2011. January 5th and 6th workshop related to this. After this, will have good sense of whether or not want to pursue PIBO.
 - v. Nutrient loading (potential new): still interest in this, especially for the Swan and Clearwater. Bruce is doing some exploratory work to look at its feasibility.
 - vi. Additions: Aquatic invasive species (AIS) monitoring (continuing) and updating GIS databases (reconsider).
- d. Socioeconomics:
- 1. Seek OMB clearance for that's currently in development (continuing): may need a little funding to get OMB clearance. Won't be ready to implement until 2013.
 - ii. Fire manager survey (continuing): in conjunction with RCAT model.
 - iii. Economic capture (potential new): Chelsea McIver and BBER have started this work and may be able to expand it to the full SWCC; Keith and Joe met with them this morning.
 - iv. Maximize utilization of wood products and biomass monitoring (potential new): concern about lack of existing approach for how to go about this.
 - 1. One objective in long-term plan is to use forest byproducts from fuel and restoration treatments to reduce management costs.
 - 2. At this point, this working group hasn't come up with any monitoring proposals that address that objective.
 - 3. Heads up to everyone that this might be something we need to brainstorm about. No metrics at this point. If anyone has suggestions, let Joe or Keith know.
 - 4. We are tracking CCF and green tons through annual report.
 - 5. Opportunity to monitor how many wood products are being burned in the field versus being utilized.
 - 6. Need to be careful to put this objective in the context of our other parameters to express the byproduct concept. Discussion for larger group (i.e. Full Collaborative)
 - 7. Questions about whether this is more of a policy discussion or a monitoring discussion.
 - 8. Maybe we should do a better job of tracking what happens to wood products after they leave the project site. Currently the agency doesn't report destinations, although we may be tracking purchasers.

9. We should identify which projects are generating wood products and track those (may be part of Sandy's project spreadsheet?).
 10. Should go through the BBER for this because they have long-time relationships with mills, etc.
 11. Should add this discussion to the next full SWCC meeting agenda.
- v. Public attitudes about closing, removing, improving roads (potential new): Joe will discuss this in his presentation.
 - vi. Tracking collaboration (potential new): this is being done via a survey as part of the national indicators.
- e. Fuels and Veg
- i. Herbicide treatment monitoring (continuing): first-year post-treatment monitoring.
 - ii. Fuels and vegetation sampling (continuing): approach and protocols being developed for the long-term plan.
 - iii. Weed mapping (potential new): not sure whether to carry this forward. Will be discussed within vegetation working group.
 - iv. Baseline fire regime mapping (i.e. fire history; reconsider): still being fleshed out.
- f. Wildlife
- i. Carnivore inventory (continuing): most likely 2-3 years up front then every three years after.
 - ii. Habitat Models (continuing):
 1. Not sure if continued funding for next year is needed.
 2. Intent this year is to understand state of science of the models, evaluate the models currently in use. Depending on outcome, may be some needed follow up for development or refinement of some of those models.
 3. The working group has the species identified but not yet the parameter values. Expect to have it by the end of the year. Jon is developing a list of the key variables from each model and the wildlife working group will review these.
 4. Travis emphasized that getting the list of variables to the vegetation working group as soon as possible will help with sampling protocols. He would also like to review the list of important covariates that go into the models.
 - a. Are there potentially missing covariates that could be included in the future? Yes.
 - iii. Model validation (potential new): may be considered for future funding.
- g. Chronosequence (reconsider): should be put under landscape level category.

- h. Other landscape-level analyses may also be brought forward but will leave discussion of landscape level monitoring for a later discussion.
- i. Next steps:
 - i. ACTION ITEM: Cory will send out table and ask working groups to narrow down what they want to fund in 2012 and come up with an estimated budget.
 - ii. Timeline for this: working groups will have draft budget by January meeting.
 - iii. Some groups are awaiting results of preliminary work to determine if projects should be moved forward (e.g. PIBO), how will the timing of these reports affect the development of the long-term plan and FY2012 funding?
 - 1. Process will not be the same as last year in terms of continually seeing new proposals every year.
 - 2. Projects should try and align with plan as much as possible, however if new priorities are identified in the future they may still be incorporated into the monitoring program.
 - iv. We need to see estimated long-term budgets for projects in the plan in order to know what's realistic for the whole program.
 - v. Prioritizing too much within each working group, we run the risk of losing integration across disciplines.
 - vi. First need to agree on objectives we want to monitor. Hopefully, we're pretty far down that road already. Next important question: what are the most important questions under these objectives that we could answer?
 - 1. Cory suggested that working groups put their questions under each objective in their order of priorities, in case it becomes infeasible to fund and answer all questions.
 - 2. Beth Gardner put it a slightly different way: the questions were defined by the Act and our job is to figure out best way/best tool to use to answer those questions.

III. Review of Long-term Monitoring Plan sections

- a. Review of changes to TOC
 - i. Intro added a section to briefly address how the Forest Service has, and will continue, to use adaptive management.
 - ii. The Methods section was split between data collection and data analysis under each objective.
 - iii. Objective A2 was moved to the economics section
 - iv. Objective b4 is new and is directed at roads: "Manage roads and trails to improve wildlife habitat quality while retaining desired public use/recreation and fire protection access".

Objectives were purposely reworded a bit broader but are in line with FLRA and CFLR proposal.

1. Will these objectives be vetted by larger SWCC? It was suggested that the TOC be presented to the larger collaborative once each working group has had the chance to draft their sections.
- v. Objective b5 is also new: "Maintain biodiversity of native/desirable terrestrial plants and wildlife".
 1. It came directly from the Act.
 2. Questions about it being too vague.
 3. Is it species focused (fine filter) or habitat focused (coarse filter)?
 4. Needs to be stated clearly enough so that it can't be interpreted in different ways by different people.
 5. This objective may need further discussion after the wildlife and vegetation groups draft their sections.
- b. Aquatics: Cameron presented a PowerPoint of the aquatics working group's sections:
 - i. Objective c1: improve water quality by managing the road and trail system
 1. Treatments:
 - a. Road Decommission with treatments that restore aquatic processes,
 - b. Placing unused roads needed in the future into long term storage,
 - c. Implement Best Management Practices to reduce fine sediment production from roads
 2. Question 1: Is management action of this magnitude actually accomplished, and does it cumulatively change the anticipated condition of watersheds based on existing Forest/Bull trout level 1 team criteria of watershed function?
 - a. Indicators: road density, road crossings, road density within stream buffer
 - b. Metrics: road disruption index as modified in the CFLRP restoration prioritization scheme for NHD+ watersheds. Number of NHD watersheds moved to lower disruption category or number of watersheds in low disruption categories.
 - ii. Objective c2: Improve habitat for aquatic species by reestablishing natural stream channels and removing barriers to fish migration.
 1. Treatments:
 - a. Restoration of channel pattern, profile, and plan forms (stream channel reconstruction)

- b. Planting of desirable riparian vegetation (riparian planting)
 - 2. Question 1: Is the short- and long-term channel stability representative of reference reaches?
 - a. Indicators and metrics: % bank erosion, D50, D85, Pool:Riffle, Wbkf, slope
 - b. Sampling design: TBD by scope of project (i.e. $\geq 25\%$ of linear project reach).
 - c. Methods for data collection: air photos, lidar, ground photos, physical surveys.
 - d. Methods for analysis: comparison to reference reach or Desired Future Condition.
 - e. Who could do: volunteers, contractors, partners, Federal employees, students.
 - 3. Question 2: Is riparian vegetation providing adequate stability representative of reference reaches?
 - a. Indicators: % survival, % ground cover, species composition
 - b. Sampling design: TBD by scope of project.
 - c. Data collection: air photos, ground photos, veg plots.
 - d. Data analysis: comparison to reference reach or Desired Future Condition.
 - e. Who: volunteers, contractors, partners, Federal employees, students.
 - 4. Question 3: Are aquatic organisms able to effectively move up/downstream at the correct time and during appropriate flows?
 - a. Indicators: population density, relative abundance, presence/absence, physical health, genetic structure
 - b. Sampling design: 10% of the structures removed or replaced that were intended to increase aquatic organism passage.
 - c. Data collection: electrofishing, PIT tags, Redd counts, genetic structure
 - d. Data analysis: before and after comparison.
 - e. Who: volunteers, contractors, partners, Federal employees, students.
 - f. Budget: \$1500/structure/year
- iii. Objective c3: Conserve native aquatic populations by controlling introduced aquatic species
 - 1. Treatments:

- a. For west-slope cutthroat trout: installing barriers to restrict movement of introduced species in state approved locations, selectively remove introduced species (rainbow, Brook, non-indigenous cuts?) , and relocating individuals of isolated native populations to formerly occupied habitat
 - b. For bull trout: remove lake and brook trout from state-approved locations
- 2. Question 1: Have treatments to prevent and control exotic species in cutthroat trout streams been successful?
 - a. Indicator 1: decrease or absence in brook trout
 - b. Metric 1: brook trout population trend
 - c. Method 1: sampling via electrofishing in representative reaches
 - d. Indicator 2: decrease or absence in Yellowstone cutthroat and rainbows
 - e. Metric 2: genetic composition of targeted conservation population
 - f. Method 2: analysis of *Oncorhynchus* samples, 30 individuals per population
 - g. Sampling design:
 - i. Once every 5 years (roughly one cutthroat trout generation) at each remnant cutthroat trout population (n=17).
 - ii. Number of sample locations varies by stream (1-4 reaches/population).
 - iii. Staggered sampling schedule so not all are sampled in any given year. Sample about 10 per year for two years, then do nothing for three years.
 - h. Who: Electrofishing by trained crews (FS, FWP, DNRC, NWC), Genetic analysis by Flathead Biological Station
 - i. Budget: \$25K/yr during sample years, \$100K total
- 3. Question 2: Have treatments to remediate impacts of exotic species been successful in preserving cutthroat trout?
 - a. Indicator 1: Stable or increasing cutthroat populations
 - b. Metric 1: Cutthroat population trend
 - c. Methods 1: Sampling via electrofishing in representative reaches (how often, likely multi year effort.....)

- d. Indicator 2: Stable or increasing cutthroat genetic diversity
 - e. Metric 2: Genetic diversity of *Oncorhynchus* samples
 - f. Methods 2: Sample 30 individuals per population
 - g. Sampling design: Same as previous
 - h. Who: Same as previous
 - i. Budget: \$15K/yr during sample years (in addition to Q1), \$30K total Q2
- 4. Question 3: Have treatments to prevent and control exotic species in bull trout lakes been successful?
 - a. Indicator 1: Decrease in lake trout abundance
 - b. Metric 1: Catch per Unit Effort, Catch of 3-yr old fish
 - c. Methods 1: Counts taken during suppression efforts
 - d. Sampling design: dependent on suppression activities
 - e. Who: FWP
 - f. Budget: Free to SWCC! (FWP already doing), Objective c3 total: \$130K
- iv. The presentation will be summarized in a word document and sent out to committee to get comments.
- c. ACTION ITEM: Cory will add an Introduction section under each objective to allow each group to explain how the proposed monitoring links back to the FLRA.
- d. Socioeconomics: Joe presented a PowerPoint.
 - i. Objective d1: In vegetative treatments, where appropriate, maximize the productive use of forest products.
 - 1. See discussion above about biomass and forest products.
 - ii. Objective d2: Benefit local economies by providing local employment or training opportunities
 - 1. Introduction: The Forest Service currently tracks some economic indicators but there is still much to learn regarding the impacts of forest restoration activities. Proposing trying to figure out whether TREAT is useful in reflecting the economic and employment impacts of SWCC restoration activities. Local capture to find out whether SWCC contracts are going to local contractors. If local contractors aren't successful, then why? And is there anything we can do to change that?
 - 2. Question 1: Does the currently used-TREAT model accurately reflect the economic and employment impacts of SWCC restoration activities?

- a. Indicators: SWCC restoration contractors' expenditures by business sector and location compared with customized response coefficients in TREAT.
 - b. Data collection: Interviews with sample or universe of SWCC contractors, obtaining expenditure patterns and building production functions in IMPLAN project economic impacts. Compare impacts to TREAT projections.
 - c. Who: During summer 2011, SWCC funded J. McKay to conduct interviews of 7 SWCC contractors. Interview results being analyzed by Susan Winter (USFS), Keith Stockmann (USFS) and Joe Kerkvliet (TWS). If initial evidence warrants, we may 1) interview more SWCC contractors; or 2) expand to other CFLR projects with Office of Management and Budget approved survey.
 - 3. Question 2: To what extent are "local" successful bidders in SWCC contract opportunities?
 - a. Indicator: Contract revenue capture rates and trends for various county-based definitions of "local" including SWCC counties, western Montana, and Montana.
 - b. Data collection: Each year, comb Federal Procurement Data System (FPDS) for USFS service contracts signed 2010-2020. Obtain Product or Service Code, Vendor Name, Vendor Address, Date and Contract Value. Aggregate by various county configurations.
 - c. Who: University of Montana, BBER, or other survey consultants.
- iii. Objective d3: Reduce fire management program costs
 - 1. Introduction:
 - a. There's a lot more than science that determines what fire managers do. Also influenced by community values and on-the-ground conditions.
 - b. There are probably also incentives within the agency to manage fire in a particular way.
 - c. In addition to R-CAT, we also want to take into account how fuels and veg treatments are changing the options that fire managers see as available to them in managing fire. And do these expanded options lead us more toward "re-establishing natural fire regimes."

2. Question 1: What are the effects of alternative vegetative and fuel treatment strategies on projected SWCC fire management costs?
 - a. Indicators: Projected probability of fires of various magnitudes and associated costs of fire management.
 - b. Data collection: R-CAT simulations of wildfire probability and severity over a limited number of fuel treatment scenarios.
 - c. Who: USFS and contract with UM
3. Question 2: Have SWCC vegetative and fuel treatments increased the likelihood that SWCC fire managers make decisions moving toward “re-establishing natural fire regimes”?
 - a. Indicators: Fire managers’ perceptions of available options for more passive fire management and subjective probabilities of choosing various options.
 - b. Data collection: Annual interviews of SWCC fire managers.
 - c. Who: USFS and contract with UM
- iv. Objective e1: monitor attitudes toward aesthetics, appropriateness of forest uses, and level of trust and commitment to public land management operations
 1. Introduction: Development of a potential survey and sampling design is funded through FY2011 agreement with UM. Looking at community support and whether that changes over time. Leading up to well-designed survey (quantitative and qualitative) that could be administered to a sample of SW Crown residents annually or bi-annually to measure over the next 8 years whether those attitudes are changing.
 2. Question 1: What are current economic conditions in SWCC, including wages and salaries, configuration of business sectors, role of wood products industry, and public and private restoration activities?
 - a. Indicators: Total wages and salaries, description of business sectors, percentage of total economic activity from wood products and forestry services.
 - b. Data collection: Data provided at the county level by Department of Commerce, Department of Labor, and Bureau of Census.
 - c. Who: UM

3. Question 2: What are the priorities of community members for timber harvest and restoration activities on SWCC public land and do these priorities change over the next eight years?
 - a. Indicators: Focus groups and community workshops to describe initial conditions and assess the language and concepts used by community members to discuss fire, restoration, and collaborative forestry in SWCC. These exercises inform the design of annual opinion survey using consistent set of qualitative and quantitative questions.
 - b. Data collection: Qualitative methods for survey design; implementation by mail, telephone, and/or internet surveys.
 - c. Who: UM or other
4. Question 3: Do community members support “re-establishing natural fire regimes” on public land and does this support change over the next eight years?
 - a. Indicators: same as Q2.
 - b. Data collection: same as Q2.
 - c. Who: UM
5. Question 4: What are community members preferences regarding forest roads? How would community members choose to allocate funds between forest road improvements versus road decommissioning?
 - a. With roads 3 choices: natural decommissioning, BMPs, recontouring (partial or full), very expensive.
 - b. Indicators: Choice experiment conducted with SWCC community members eliciting preferences over various road closure and repair configurations.
 - c. Data collection: Mail survey
 - d. Who:
- v. Objective e2: Increase collaborative participation and funding
 1. Question 1: What are the patterns of partnership participation in SWCC and what are their determinants?
 - a. Indicators: Meeting participation by members of SWCC and others in executive committee meetings, regular meetings, and monitoring committee meeting.
 - b. Data collection: Meeting notes.
 - c. Methods for analysis: Logistic regression analysis.

- d. Who: Members of the socioeconomic monitoring committee.
 - e. ACTION ITEM: Aquatics and Socioeconomics groups will put their presentations in a Word document with as much detail as possible and send to Cory to forward to the full committee for review.
- IV. Next meeting: December 8th, 1 – 4pm, Seeley Lake RD