



Fire Danger Working Team



Minutes
November 19-21, 2002 Meeting
Chaparral Suites
Scottsdale, Arizona

Attendees

Name	Agency	Email
<i>Members</i>		
Pete Guilbert	CDF	pete.guilbert@fire.ca.gov
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<i>Guests</i>		
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Tuesday, November 19th:

Update on Possible merger with FWWT (Schlobohm). Paul reviewed the presentation on the merger to the NWCG parent group and the working team chairs meeting with the parent group in Gettysburg PA. Wayne Mitchell, chair of the Fire Weather WT and Paul have been assigned to develop possible alternatives for further NWCG consideration in January 2003.

Strategic Plan and Budget (Schlobohm). The emphasis of this meeting. Initial discussions of possible projects and budgets to meet a revised strategic plan. These included events to define the needs of the interagency fire weather/danger community (through a fire weather business model analysis), the continuation of effort to create an interagency agreement concerning future of ASCADS, WIMS, and WFAS. Assigned ad-hoc (Hirami, Guilbert, Schlobohm, Bradshaw, Fujioka) group to develop a draft 2004-2006 strategic plan for WT review on Thursday.

Data Administration Working Group (DAWG)

Judy Crosby gave a comprehensive overview of the objectives of the working team and what they will provide. (See handouts and attachments on CD.) Possible implications for FDWT: We employ a large amount of data to develop fire danger applications, and if future systems are going to be developed in an interagency manner, standardizing these data through the DAWG may be in our future.

NWCG Glossary: Fire Danger Terms

Schlobohm and Crosby explained the status of the glossary revision effort. Many existing terms have been "claimed" by each WT. Unclaimed and overlapping terms are now to be addressed. Eventually, a new list of terms related to fire danger rating will be developed. Some ad-hoc group time during this meeting was used to review and amend the FDWT list of terms (Shelley and Swanson).

WIMS

Barrowcliff and Barnes presented a summary of WIMS status.

Phase 1. Still in progress. Mainframe costs are overwhelming. Number 1 priority is to get completely off the mainframe. At that time there would be no more charges to users. Items of note:

- RAWS ingest is now on an NT server.
- NWS Gateway should be off mainframe in Jan 03 via socket streaming.
- Database migration expected by March 03.
- Have good maintenance contract through 2003.

Phase 2. Lacking funding due to borrow-back last year. Have funding request in again this year. Will be March 03 before they have budget. Focused on creation and implementation of the Data Warehouse concept so users can easily create ad-hoc queries.

Need funding commitment. John Swanson suggested adding the support of the team for funding requests via a letter to the FS or NWCG. Mike felt that they should be ok for this year to complete Phase 1 and out year funding may be helpful. Addressing of Phase 3

development is realistically on hold until the business model of the fire weather process is complete and relationships between WIMS/ASCADS/WFAS are solidified. In the end the decision was not to write a letter or ask for NWCG funds for phases 2 and 3, but to put in a budget request for funding a fire weather business model analysis. This is reflected in the strategic plan and budget request.

Action Item: Fire Weather Business Model is put in Strategic Plan and Budget Request (Executive Team).

Bradshaw noted that the Firelab and all the GACCS are operationally using FTP to submit batch queries to the legacy database (on the mainframe) and that functionality must be planned for and maintained when the database is moved off the mainframe.

Action Item: Ensure automated queries submitted via FTP or other means will work off the mainframe and give instructions how to modify current operational scripts in time to change them before the database is moved off the mainframe. (Barrowcliff & Barnes).

ASCADS

Mark Barbo. ASCADS is fixing the emergency repairs required but has no structure and support personnel for major upgrade (i.e. ASCADS II) or increased off-hours support. Now support less than hourly data transmissions and 64 data fields. Moving to a secure internet access software package and are not sure if all ASCADS users need to purchase special software to access. They support the idea of the fire weather business model and increasing system support during downtimes. Expecting the new direct readout ground station (DGRS) to be installed at NIFC by spring.

Action Item: Determine what software will be required to access ASCADS. (Barbos & Shelley) and communicate to user community.

Joint WT Recommendation on Weather Systems "Acceptable Downtime"

Schlobohm passed out a FDWT/FWWT draft of acceptable downtime recommendation. See attachment:: fwx_sys_uptime.pdf. There were three suggestions from the group:

1. Use the operation metrics currently in the WIMS vendor contract
2. Add NWS, Telecommunications Division to the responsible agency list
3. Add NWS to signature section

Action Item: Schlobohm work with other WTs to finalize recommendation for January 2003 NWCG meeting.

WIMS Task Group Review (Gripp)

Original charter was 3 years and currently in 3rd year and is working very well. Need to revisit, fill some holes, and recommit. Task group is needed for 2 more years. Also letter of thanks should go to supervisors of task group members. An ad-hoc group updated the charter. See attachment: fdwt_rev1wimschrt.doc)

Action Item: Russ follows up with task group members; Paul sends letter to supervisors.

NIFMID Data Issues

Bradshaw noted that the problems caused by the loading of the WRCC datasets with duplicate records, incorrect precipitation amounts, and incorrect wind directions are starting to cause systemic problems with FireFamily Plus Users. Also the relative humidity/wet bulb issues that have been in NIFMID since AFFIRMS was transferred have not been addressed. Suggested forming a small "data scrub team" to focus on getting these issues resolved and volunteered to lead it. Team will be Bradshaw, Barrowcliff, Barnes and Gripp and will coordinate with a January 2003 meeting in Boise of the WIMS task group.

Action Item: Bradshaw will coordinate scrub team to design and implement a strategy to correct NIFMID data issues. Will initiate work at task group meeting in Boise, early 2003.

Website

NWCG website is going to "accessible format." Cannot have a 'private' side for password access. Prototype by Bradshaw dropped from task list.

S-491

Schlobohm reported that S-491 is about to be published and put on the shelf. Gaining an Understanding of the National Fire Danger Rating System (NFES # 2665, PMS #932) is now available via PMS. The NFDRS reference materials CD was sent to Boise on December 12th. Issue was raised that instructions to the instructors point to the FDWT to identify a lead instructor. Should be to the steering committee of the National Course where NARTC maintains the instructor database.

Action Item: Paul S. will get this redirected to the NFDRS Steering committee.

National Course exercise (N. CA) will be become an 'example' and students will work in several locations throughout the country. Data will be provided; students will mine what they need. Also re-writing the course description on the NARTC website in a more positive tone.

Wednesday, November 20th:

Regional Report: Fire Danger Rating in the Southwest

Rich Woolley and Larry McCoy presented a comprehensive update on the successful use of NFDR in the Southwest Geographic Area during the 2002 fire season, particularly in the 10-day outlooks. They summarized with a list of issues they would like to see addressed:

- Need Better Communication process to allow use of NWS forecasts for next day ratings.
- Everyone who provides input to or receives output from NFDRS has to have some basic understanding of the system (NWS included).
- Pocket Cards: A mandate without clear explanation to those who need to understand it most. Need a bare-bones explanation of the concept of fire danger indices and pocket cards at the earliest possible level (i.e. S-190/S-130).
- ASCADS/WIMS need to be the same thing.
- Potential for big leap forward when daily observations become automatic. Need automated NFDRS observations ASAP.
- Somewhere within the fire management organization, it needs to be mandated that NFDRS be tied directly to funding and decision making. (Shouldn't be the only tool, but needs to be more than just one at the back of the shed that's hauled out for severity requests)
- Full-Time RAWs maintenance personnel needed to maintain network data integrity.
- A lot of elements and a lot of training required just to operate one station correctly and to full benefit! Who is actually getting this?
- Most RAWs owners have no idea anyone else uses the data.
- Significant local QC is needed when data is downloaded to Fire Family Plus, problem is they never go back to WIMS to update their changes.
- Need to solve the RAWs site issues. Do we recommend moving stations and losing the history or should a method be developed to correct sheltered winds using roughness and other factors.
- Multivariate calculations in FF+. (i.e. ERC & IC combined to solve Adjective Rating)
- Local Observation....It appears that many higher level fire managers have little or no knowledge of NFDRS and how to use it, much less our folks on the ground! The system seems to have little chance of effectively progressing if upper management doesn't buy it.

Discussion following was focused on the RAWs program, particularly maintenance. The SWGA updated 20-25 RAWs stations this summer.

Q: Paul S. Is RAWs part of the PD of the predictive services meteorologist?

A: Ochoa. Yes, it was.

Q: Gripp. Is it a goal to get maintenance back to the field?

A: Wooley. Yes as a goal. In reality it will not happen with the current RAWs management and lack of people and training.

Curcio: Station maintenance is part of yearly readiness inspections in NC.

Ochoa: Is bad data better than no data? Should we shut off data to enforce maintenance?

Bradshaw brought forward a concern from Paul Werth (NWGA meteorologist) on the NWS's Integrated Forecast Process System (IFPS) to generate point forecasts for NFDRS by this fire season. Missoula NWS prototyped some forecasts this summer. Paul Worth's concern was the IFPS would ignore the RAWs observations if a forecast was created straight from the grid as was prototyped in Missoula. Rusty thought the best way to use grids is to generate a trend forecast from the grids and apply them to the RAWs observations. This needs to be monitored as the NWS is on a schedule to develop and test this technology during this upcoming fire season.

RAWS Network Study

Zeller presented update on FS RAWs study. Noted general lack of maintenance of station metadata and station sites (instruments and surroundings). Noted that with OSHA restrictions on tower climbing, many 10-meter towers are being replaced with 20 foot towers and data may not be flagged. Presented a comparison of "O" type observations from WIMS versus 1300 LST WRCC for a station in Colorado.

Recommendations:

- People who have RAWs duties should have it as part of their Position Description.
- Bottom line is that RAWs is a useful program that needs to be funded and well managed.

Bradshaw questioned the disposition of the final report since nobody has seen a completed draft. Noting there were a number of disputed issues in Karl's presentation, the team requested to review and comment on a near-final draft.

Action Item: Tom McClelland will ensure draft report is distributed to FDWT for review and comment before being considered as a final report.

Team Leadership. It is time for leadership to rotate. Pete Guilbert's CDF duties are not changing with Fire Danger Rating and Pete has agreed to take up the vice-chair position from Larry B. who was acting in the interim since Doug Anderson's departure. Paul S. thought it wise not to change leadership during the Parent Group discussion on merger. It was agreed that Paul hold the chair position at least until spring. Pete, as vice-chair will assume chair after Paul, and Patti will move to the vice-chair position. This puts the rotation back to the state/federal cycle that has been the history of the team. Paul will not make the spring (March) meeting in Fairbanks.

Action Item: Pete and Larry will coordinate the spring meeting (March 17-21) in Fairbanks.

FS Research Updates

Bradshaw (Missoula)

- Latham has retired, Colin Hardy is new project leader
- FireFamily Plus 3.0.1 was released in August 2002
- WFAS upgrade was activated in August 2002 with real time archives.
- Reported on Nelson Model sensitivity to instantaneous, 10-min, 30-min, and 60-min average solar radiation measurement. Computed 10-hour fuel moisture varied by less than 1% between instantaneous and 60-minute average. Recommend that Weather Stations Standards be updated to reflect the WMO standard to make the data useful to the most people. (Tim Brown later reported that 60-min was WMO standard.) See attached recommendation to FWWT to modify NWCG NFDRS weather station standards (revision proposal to FWWT.doc)

Action: Schlobohm finalize recommendation and coordinate with FWWT

- Prototype and 2000 case study in PNW-MM5 modeling consortia is near complete.
- 8-km NFDRS climatology is late but coming along.

Fujioka (Riverside)

- Linkage between the MM5 and a diagnostic model for high resolution wind (Bay Area).
- GIS interface with the Hawaii NFDR Project using FS Enterprise Team and GIS specialist.
- Risk Assessment paper to predict number of fires across a map grid. New term, voxel – a cell with depth – in this case time. Uses log-likelihood with Relative Greenness and the 1989-1996 spatial fire occurrence database in Oregon. Manuscript is under review.
- CA MM5 cluster procurement is proceeding.

CEFA at DRI

Tim Brown presented the current status on:

- RAWs climatology
- Lightning climatology
- ETA-Based mixing heights
- Ensemble Charts
- Critical Fire Climate Patterns
- SW Monsoon Study (onset definition) and regional impacts
- Estimating Greenup Parameters from NDVI for NFDRS (Schlobohm's MS)
- Fire Location Assessment (100K of 657K had invalid Date or Spatial Reference)
- Advanced Climate Initiative (next 100 years sees three weeks/year more ERC > 60 than current).
- Analysis of difference precipitation/drought indices for fire management

Fire Danger PocketCards

Schlobohm brought an issue to the table on a request for Spanish pocket cards. It was summarily dismissed as perhaps technically feasible, but not operationally realistic.

Sexton led a discussion on his perspective on Pocketcards from the 2002 fire season. He noted it is an onerous requirement and had potential to detract from the Fire Behavior Analyst briefing. In essence, on a large fire, why give generalized information when you have site and time specific behavior predictions?

Going back to the intent of the PC we need to re-focus that it is most appropriate for IA and EA and that the 30-mile actions state it should be given to the superintendent of each crew, not each crew member.

Swanson thought the cards did provide good situational awareness on fires his team was on this year and that the web instructions updated in June were good. An ad-hoc group was formed to further refine the web site and develop recommendations to address concerns. Also, Sexton and Wordell were to talk with Jim Paine about content.

Curcio recommended a page in the NWCG Incident Response Pocket Guide about pocketcards. A recommendations list:

- Focus distribution to Initial and Extended Attack situations
- Not a disengagement chart
- Not bilingual. Communication is #1
- Needs lifecycle guidance
- Need clear instructions on what it is, how to use it, and what it is not.

- Need page in NWCG Pocket Guide.

Action Item: Schlobohm to coordinate issue paper (see attached) and web update. (Most of you have received three versions by now.)

Thursday, November 21st

Predictive Services

Wordell gave a brief summary of the first full year of predictive services and some products they are working on:

- Official name is now “Predictive Services”
- Charter was signed off last winter and is being reviewed and updated.
- Mob Guides will require a Seasonal Assessment. Previous CLIMAS type workshop this year will be more operational (vs. research) oriented and the product and the end will be an early season Assessment for each GA. Workshop is week of Feb 25th.
- Working with DRI and Missoula on 15-Day AVN Forecasts
- Endorse need for Federal Fire Database.
(Barrowcliff noted the IRM working team had done a briefing paper on alternatives using a common data standard and single point access to get two existing initiatives (NFSIP and NFIRS) back on the radar screen.
- Development of CHEETA, a combined Federal data set focused on identifying fire episodes by FS boundaries.
- Standard Web Sites between the Predictive Services at each GACC
- Product Standardization and Validation

Red flag Warning Proposal

Delgado presented a Red Flag issue that NWS forecasters are faced with. The NWS is tasked with issuing Red Flag statements (critical weather) when fuels are “sufficiently dry” but NWS folks are not fuels experts. So they make calls to land management agency folks and get a variety of opinions. The desired state is a true interagency Red Flag program where the land management agency provides fuels-condition information on a consistent basis.

In concert with Tim Matheson (RMGA meteorologist) they developed a prototype GIS application that has the fire weather forecast zones and users (land management) can select zones and set each zone of a ‘sufficiently dry’ state (i.e. yes or no).

They plan on putting a JFSP proposal together to get funding to improve on the prototype and would like a letter of support from the FDWT.

Rusty noted the NWS via national direction has been to work with local users via the Annual Operating Plans and the possible conflict of getting national/regional direction from the GACC but being responsible to the local users.

Bradshaw thought the 8-km climatology being developed, in conjunction with daily WFAS products, may be a method to make an initial assessment of the fuels being ‘sufficiently dry’ (i.e. if fuels are –2 standard deviations in the non-fire season, a red-flag may be warranted, but during regular fire season a –1 or less may warrant the sufficiently dry trigger.) The initial map could be modified by local users.

Fujioka thought the GIS type work done in Hawaii could also be applied to this problem.

Action Item: Bradshaw/Fujioka both offered assistance in reviewing and assisting in the proposal and project. Schlobohm will write letter of support to JSFP if requested by Delgado

Action Item: Agenda item for March meeting: define Red Flag Warning Criteria.

NWS Station Numbers

Billingsley reported on an issue from the FWWT on station numbering. The question was who is really responsible for giving a RAWS station a NWS number. Rusty found a Weather Bureau report requiring an NWS ID for 'Automated Data Process' but as far as he could tell, the internal NWS processing no longer uses the NWS (6-digit) number; it uses the NESDIS ID. So NWS is custodian for ID's they do not use.

[As I understood it, Rusty was not yet asking us for a recommendation to let the agencies do the numbering, he was simply exploring what we knew of the situation vs what he had discovered.]

Action: Revisit for possible recommendation next meeting.

Revision of Strategic Plan

A subgroup reviewed the strategic plan and updated as required the membership and project status. See attachment: Strategic Plan (fdwt_strategic_plan_3.rtf)

Develop Budget Proposal 2004-2006

The executive committee updated the budget request based on projects in the strategic plan and the continuance?. See attachment: NWCG Budget Request (fdwt_budget_request.rtf).

Telephone Telemetered Data at WRCC

Gripp pointed out that although we advertise that by participating in WIMS the data are available corporately, this isn't true for the hourly data being hubbed and transferred to WRCC. Bradshaw noted he was facing the exact issue for Bitterroot stations from the summer of 2000 and was working with Greg at WRCC. Bradshaw volunteered to coordinate with Greg on the process and see if additional resources are required to get hubbed data in the same access format as the GOES data.

Action Item: Bradshaw to follow up with McGurdy at WRCC and report back next meeting.

Training:

WIMS training course development: Gripp repeated his annual observation that a WIMS training course is still needed. Agendas and some powerpoint presentations are available from the ad-hoc courses CA and Boise have put on and may just need to be cleaned up to create good framework. He stressed the course needs to be in-person, not distance learning or tutorial.

Action Item: Bradshaw to gather materials and include on Minutes CD so everybody can see them.

Fire Behavior Advisory Committee News:

Schlobohm reported on a recent meeting where distance-learning (a contract is in place with a development group) modules were proposed for development for portions or all of the following, listed in priority:

- Behave Plus
- S-492/493
- FireFamily Plus
- S-491
- S-390/490
- S-590
- Basic fire fighter course

Haines Index Climatology Project

Schlobohm passed out a progress report (09/23/2002) from the Haines Index Climatology work by Brian Potter. (See attachment on Notes CD).

Review: Anemometer Height

Jim Brain forwarded an issue from the Southeast where trees blocked wind from one quadrant but not from others, so they manually adjust wind speed when it is from certain directions but not others. They want that capability automated in WIMS.

Action Item: Bradshaw will work with specific users to give a recommendation, but it will not include an automated wind adjustment factor in WIMS.

Review On-Going Tasks

See Attached Task Sheets.

Next Meetings

Spring, 2003. March 17-21, Fairbanks, AK (with GACC Mets)
Focus: Connection to Pred. Svc. Mets and how to help.
Using synergy of new and highly technical people.
Details TBA.

Fall, 2003. Week before Thanksgiving, Nov.17-23.
Location TBD.

Attachments Referenced from these notes:

1. Strategic Plan
2. Budget
3. Draft Time Available Proposal (draft recommendation fire wx data system)
4. RAWS Task Group Charter Update (fdwt_rev1wimschrt.doc)
5. PocketCard Recommendations (final version from Schlobohm, 12/16/02)
6. Fire Danger Station Standards Revision Proposal to FWWT
7. Ongoing Task List
8. Completed Task List
9. Current Membership List

Additional Attachments/Handouts that will be sent on meeting CD in January 2003:

DAWG Documents

Missoula Fire Lab Update

Haines Progress Report

Notes from NWCG 85th Meeting in Gettysburg

Anemometer Height Issue from Jim Brain

WIMS Re-Engineering Strategy

WIMS Training Documents