Fire Danger Working Team
Meeting Minutes. February 2-4, 2005

DRI - Reno, NV

Attendance:

Kolleen Shelley	Rick Ochoa	Dick Bahr
Tom McClelland	Wayne Mitchell	Rusty Billingsley
Gary Curcio	Mike Ziolko	Deb Holley
Rich McCrea	Paul Schlobohm	Herb Arnold
Jeff Barnes	Tim Brown	Heath Hockenberry
Pete Lahm	Joe Kennedy	John Swanson
Russ Gripp	Larry Bradshaw	

Proceedings:

Introductions
Tim Brown logistics
Attachments can be found at: ftp://ftp2.fs.fed.us/incoming/wo_fam/Paul/

#1: Fire Environment Working Team status (led by Paul Schlobohm)

Paul led discussion. Excerpts from the PowerPoint presentation given to NWCG were shown illustrating organization of FENWT and other entities. Emphasis was given to these details about FENWT:

1) Groups that are not chartered under NWCG are included.
2) The FENWT membership represents disciplines primarily and agencies secondarily. Full NWCG agency representation will be present at the committee level.
3) One objective was to address and resolve overlapping issues related to the disciplines represented in FENWT.
4) A second objective was to reduce the number of working teams in NWCG.

Paul identified the initial representatives on FENWT. They are:

NPSG- Gerry Day	FAICG- Dennis Haddow	NIFCG- Dennis Dupuis
NWS- Leroy Spayd	NWCG- Alice Forbes	Research- Mike Hilbruner
F. Behavior- Wayne Cook	F. Danger-Larry Bradshaw	F. Weather- Dick Bahr
E. States-Joe Kennedy	W. States- Wayne Mitchell	Chair- Paul Schlobohm

First Meeting of FENWT will be the last week of March. Chartered committees under FENWT will be Fire Behavior, Fire Weather, and Fire Danger. Hopefully, chartering of the sub-groups can be handled at the March meeting. The connection between Committee's was briefly discussed. The strongest connection between groups is expected to be at the FENWT level.

See Attachment 1 for slides presented.

#2: Adjective Rating (led by Russ Gripp & Mike Ziolko)

Russ G: Discussed changes that have been made to the presentation of adjective ratings in Southern California. The color black was added to the standard 5 colors to indicate forest closure. The black color is actually indicating an administrative decision (closure) based in part on fire danger rather than the fire danger rating itself (e.g. Extreme), but it is displayed like a rating. This color was presented to CA Firescope. Terminology is being confused. How should this be addressed, if at all?

See Attachment 2 and Attachment 3 for background documents.

Mike Z: Most states are using the five adjective ratings with the exception of Oregon & Washington. In Oregon, the state uses a four-class system and when Feds are involved either four or five classes are used depending on local arrangements. In Washington State, there is a hybrid system of using four fire danger classes for public information. PNWCG feels the Oregon & Washington systems are working great. OR/WA use fewer classes and CA displays more.

Joe commented that part of the Northeast is using the 1964 system of nine classes. (These 9 classes are aggregated into the 5-class system today.) Michigan, Wisconsin and Maine are using the Canadian system.

Question – Is this important or a serious concern? Why was there a standard of five adopted in the past? The work came out of the early 70's as AFFIRMS (predecessor to WIMS) was developed.

Public understanding is central to the importance of this issue in both cases. Does the public know what the meaning of each color is? There is potential for confusion because of the mix of administrative meaning versus fire danger meaning in Southern California. The need for consistency may be important enough for the group to comment on these issues. Gary asked, can activity levels be brought into the adjective fire danger classes?

Paul suggested we pass the issue on to the new Fire Danger Committee (FDC). The FDC may have to working with other NWCG teams like Wildland Fire Education, Social Science, and WUI Teams.

Action: Recommend FDC address the appropriate use and communication of adjective fire danger ratings.

3: How do we compute Adjective Ratings (led by Gary Curcio)

Adjective rating is based on current or predicted value of a combination of staffing level and the value of the ignition component. Definitions taken from "Gaining an Understanding of NFDRS, pages 29-31" were presented. As stated in #2, the intent of adjective rating is to inform the public.

Gary presented an example in North Carolina from October 25-26, 2001 near Raleigh. Nearly all large fire potential benchmarks were met, ERC/IC/SC/BI were all setting new maximum values, drought was indicated, RH 13%, FM was very low. The point forecast predicted hazardous burning conditions. Despite this, the adjective rating as computed by the current rule using fixed ranges for staffing level and ignition component was in the "High" class. The extreme values did not come close to hitting the "Extreme" level. The "Extreme" level combination values historically only occurred twice out of more than 11,000 opportunities. The Adjective Rating and NFDRS credibility was hurt in this case. "High" was actually an "Extreme" event.

This is a legacy issue on how adjective ratings were developed. A process needs to be developed to have locally adapted systems relate to similar colors. The use of flexible, user-defined levels, such as those defined by fire business thresholds, in place of the current rigid rules was discussed. A closer relationship between adjective rating and staffing level (especially in areas like NC where it is weak) was requested. This item needs to be carried forward in the future.

Action: Recommend FDC provide direction to FENWT on the evolution of rules for calculating fire danger ratings.

 # 4: Forecast Standards and Accuracy (led by Rick Ochoa)

Standards developed several years ago were not implemented. Yet the need for forecast standards remains. This is an on-going task that was assigned to Rick in conjunction with his similar effort for the Fire Weather Working Team.

How do we define the forecast standards and are they based on the needs of fire management and Predictive Services? Rick is proposing a team of fire weather and fire danger experts to take a look at defining standards. He suggested regional workshops with practitioners setting levels of weather parameter accuracy for NWS and Predictive Services products. This would define goals. Gary asked who the practitioners are. Do the burn bosses and practitioners know how these numbers are crunched? Also, can we find appropriate weather professionals to help set goals based on the current level of science? Rick stated he would envision an "informed" workshop of people who know how items are calculated.

Gary asked if there was a standard of how mixing heights are determined. NWS was evidently not using the same standard. A standard way of calculation would be discussed in a workshop. Air Stagnation Advisories were discussed as well. Inconsistent information is given sometimes because of inconsistent requirements. This was a problem in North Carolina and also the Southwest.

The Fire Weather Committee (FWC) could be charged with resolving this and keeping smoke management in mind when tackling this issue. Rick suggested a goal of FY 2007 for developing standards. Gary noted that NWS product update standards tied to absolute

standards for forecasts and Forecast Office-to-Forecast Office consistency would go hand-in-hand with the standardization workshop process.

Tim Brown offered clarification on Office of Federal Coordination of Meteorology (OFCM)'s potential role in this process. The OFCM helps coordinate efforts such as this and their report goes to OMB & Congress. It needs a request from the Director of the NWS and also possibly the Chair of the NWCG to the director of OFCM. OFCM is paid to do this so it will be no cost. A committee will be established to look into this from OFCM. A question was asked on the process that OFCM uses to coordinate these issues. FENWT should look at samples to better understand this process. Tim provided the Table of Contents of a report produced through the OFCM process to demonstrate the depth and scope that could be expected. Content of the handout can be viewed at: http://www.ofcm.gov/wist_report/wist-report.htm.

Does the FDC recommend that the FWC lead this effort? Rick suggested that the Chairs at the FENWT level decide who should lead the effort.

Action: Recommend FDC take this task (Forecast Standards and Accuracy) to FENWT to determine lead committee and appropriate coordination.

 # 5: Fire Potential Definitions (led by Rick)

Rick provided a handout on a National Predictive Services Group (NPSG) effort to define and compute "fire potential" based on several standard components. The plan is to implement during the 2006 fire season. The handout showed two different sets of definitions that may be used to define fire potential. Rick asked the group to look and comment on the definitions.

Heath pointed out that the product uses projected gridded weather data that is correlated to fire business. The forecast runs out 7 to 10 days which differentiates this further from just an NFDRS forecast. The question was asked how green-up is handled. Mike Z. explained that the Northwest forecasters attempt to handle this problem with dependence on information from the station owners.

See Attachment 4 and Attachment 5 for handout material.

Action: FDWT members provide comments on proposed fire potential definitions to Rick.

Action: Recommend FDC coordinate closely with NPSG on the development of fire potential definitions.

 # 6: Databases, FS Data Warehouse and Geo-databases (led by Paul and Jeff)

FAMWEB data warehouse. This will be a new structure of storing and retrieving many types of data, including WIMS and GIS layers. Currently FS is in the early stages of scoping and development. Jeff's intent here is to raise awareness of this effort. It will use a dynamic data query and should simplify the process of accessing data. On KCFAST, there used to be an old data filter. With more data sets available, the filtering becomes more important.

Selling points: Single structure to provide access to data
Will be used by ROSS
Helps avoid resource conflicts on data requests
Data organizes into pre-determined themes for ease in filtering
Provides a tool set to query sets of data from dispersed sources

Currently Jeff's group is identifying requirements of the data warehouse. If your requirements have not been explained, get with Jeff Barnes. Geospatial data requirements are also being defined.

Question: Could this replace NIFMID? Will the NIFMID data be placed on the FAMWEB data warehouse? Yes. The WIMS data will still be there in the new querying system.

Will the new, one fire reporting system be linked to this data warehouse? This is unknown. Eventually however, there is an expectation that this will all reside under the accepted NWCG Enterprise Architecture.

It would be a single sign-on with a web portal, likened to a "shopping data-mart". NIFMID and Climate center sometimes have different data sets. Hopefully the data warehouse will match climate center data. The engine can explain exactly where the data came from. FPA data, for example, includes generated data and should be clearly separated from records that are entirely observations.

Question: If the data warehouse will potentially provide some of the critical features that have been called for in recent efforts to "Re-engineer" the fire weather systems (e.g., ASCADS, WIMS, WFAS, etc), why is this data warehouse effort such a surprise to so many of the folks who have been working in this direction? Where is the coordination?

See Attachment 6 for prepared comments on this and other agenda items by Mike Barrowcliff. Mike was unable to attend the meeting.

Action: FWWT members who have not been contacted regarding the scoping of the data warehouse should contact Jeff Barnes or Mike Barrowcliff to set up an interview.

Action: FDC needs to report to FENWT on this effort to ensure coordination among and inclusion of FENWT members in the development of the data warehouse.

7: FPA data set (led by Beth Hall from CEFA/DRI)

Fire Program Analysis (FPA) through Howard Roose asked Tim Brown's Program for Climate Ecosystem, and Fire Applications (CEFA) to assemble the weather data necessary to run analysis software for some FPA processes.

In 1999, agencies in California asked CEFA to "clean up" RAWS data and remove obvious/questionable data. FPA also asked to produce a complete dataset where there were obvious gaps. CEFA began by using the process they developed for California. FPA supplied a list of RAWS and non-RAWS stations that are needed. Matching records by station identifier codes was an initial problem between the RAWS archive at the Western Regional Climate Center (WRCC) and NIFMID. WRCC does not always have the six-digit station number metadata. Also the period of record between NIFMID and WRCC sometimes did not overlap. For those stations that could be accurately identified, a coarse QC was run on the data to flag strange values.

To create the complete data set, RAWS had to be correlated with NCEP/NCAR Reanalysis data. The spatial resolution was 2.5 degrees with time resolution at six hours. Upper air variables, surface variables and surrounding grids were used. Then, multiple linear regression output was used to estimate all missing, questionable or erroneous data. Various processing and analysis problems and their solutions were presented. CEFA's effort for California had shown this to be a better approach to estimation than using estimates based on the nearest RAWS observations.

Data sets produced:
Once-a-day in the old NIFMID format (*.fwx)
Hourly in the new NIFMID format (*.fw9)
Comma delimited complete data set with flags indicating value status (*.dat)

Summary and Stats
A file that lists station status (e.g., can the station data be processed…why or why not)
A file that lists the percentage of estimated and removed data.

Future – Process as many station as possible, validate estimations, and integrate original NIFMID data into analysis where possible.

Question: Could data be returned if problems were found? Prototype areas were identified asking for problems. Some areas commented back to Beth…others didn't. However, the unvalidated data is marked as such. Many areas are overwhelmed and desperate for data due to the due data of mid-February. Validation efforts will be made after February deadline, however. Eventually, CEFA will be able to tell users through cross-validation how statistically confident the data is. There is a New York data project that could be leveraged to validate the FPA data.

Question: How good is the FPU process if the data is not validated? CEFA feels awkward handing out data without data validation. If decisions are made based on non-

validated data, it may be a bit suspect. However, FPA is mandated to run numbers by April to initially justify the 2007 suppression budget dollars. It is a strategic tool for planning budgets. For coarse-scale strategic purposes, especially in FPUs with very little data archived in NIFMID, some were not as concerned about the short-term lack of validation. (Subsequent discussion with Howard Roose suggests that all areas will have the time to make their processing runs with validated data.)

The FPA data could highlight major historical data gaps. Eventually, there will be a final report on the quality of the data.

What happens to the database? FPA has asked the FDWT to provide a recommendation. Tim suggested a web interface through CEFA/DRI to access the FPA weather data. Also, the NIFMID data could also be available with an automated process to update the data. If Reanalysis data could be housed in an area that is completely different from the original observed data, it may be less confusing when the data is utilized. Also, Russ stated that these data files may be able to be checked initially by Fire Family Plus. However, once the data is loaded, it doesn't differentiate.

Jeff's idea was to place clear disclaimers on data sets to better isolate different types of data sets. Again, physically separated data storage initially could take care of some of the confusion.

Question posed: Why are over 1000 stations being examined? This was above the original request. High quality, long duration stations should be the only ones being examined. Response: FPUs deem all these stations as valuable. But, how many stations are really necessary? That question hasn't been answered. It was suggested that planning units run the data with original available NIFMID data. After all, they have it already. Then, run it again using the reanalysis data and make comparisons. Or, examine and compare the data statistically to see if they will produce significant differences. Once again, deadlines are driving the work.

It was noted that the immediacy of the data need and short deadline was driven by a mid-project change regarding from where FPA would get the weather data. The original idea was to use 5 km grid data developed by Scott Goodrich.

Should there be a standard developed for RAWS data quality? NCDC, the National Climatic Data Center, may be able to provide mechanisms to help define what a RAWS data quality standard would be. Such a standard for RAWS does not exist. Also, the check of the quality of the data was only at the application level and not in the database. There was and is high reliance on the human when the observation is first entered…with no checks of quality at the database level.

Action: FDWT recommends to FPA and FENWT that the synthesized dataset being developed by CEFA for FPA purposes be located and accessed at CEFA/DRI on an interim basis. The final resting place for the data may be integrated into the future design of fire weather systems that is now a task before FENWT. FDC should remain

in close coordination with CEFA and FPA regarding the status and implementation of the FPA dataset.

#8: Gridded data and point data (led by Larry Bradshaw)

Larry provided a handout outlining historical progression of point and gridded data. Efforts from Larry, Tim Barker and Predictive Services concerning gridded data were discussed. Also, the Pacific Northwest MM5 and standardized ERC forecast history was discussed with gridded NFDRS output. The standardized ERC forecast uses the Global Forecast System (GFS) to project anomalies out 15 days. It also uses a national climate depiction called DAYMET that produces daily climatology data sets. The main problem with DAYMET is no direct humidity – it is calculated from dewpoints and low temperatures from which RH is derived. DAYMET also uses a fixed time period, with no continual updates. Matt Jolly was added to the fire lab recently and is quite adept at gridded data.

In the summer of 2004, the NWS started to provide the National Digital Forecast Database (NDFD) that runs at about 5 km resolution. It product output includes reference which makes it easy to import into GIS platforms. NASA is also producing weather charts in an "Ecological Forecasting" system that uses gridded data. In a nutshell, gridded weather data is the future.

Paul made the point that fire danger however is still living in the point data world. We use one or more point data sources (e.g., RAWS) to represent a spatial area. Question: Given our gridded input data destiny, what is the minimum spatial and temporal scale at which fire danger outputs are needed? Is the fire danger rating area the minimum spatial resolution? The NDFD resolution is a 2.5 km grid. The underlying process of producing fire danger depictions using grids was discussed. The forecast resolution will continue to shrink, but the aggregation of the data and how it is put together is a key. Right now a point represents an area. With background work with additional observed grid sites with "real" data and even satellite information, the data is there to define areas of uniform fire danger ratings "on the fly" as they occur throughout a given period of time (e.g., one day). There could be mixed areas of resolution if warranted to address a problem. Weather from NDFD will run on a fixed grid. Question: will there be the ability for a mobile higher resolution grid? Rusty responded that 1 km seems to be the ultimate goal of most large scale modeling, i.e., the resolution necessary for most applications. The NWS is headed toward national 2.5 km gridded data for NDFD.

The fire danger rating area concept with gridded data and "floating" areas of similar fire danger based on the weather grids is a large paradigm shift. Decision making would also change. History of rating areas and management practices must be considered. Operational decisions and the way they are made somewhat "lock" the system in place. Decisions are made with fixed areas in mind. Dynamic resource allocation however is coming online breaking the locks on fixed areas somewhat.

This discussion is not a description or endorsement of an impending situation, but rather an exploration of some of the possibilities ahead. The grids will morph over the course of many years. The way the NWS is setting up the system, other agencies can use the gridded data in any way they want.

Rusty also explained the NWS is expanding in complexity and product volume to service as many folks as possible.

Joe asked how we are going to package this kind of information. Tech transfer to the field needs to be packaged logically so that it makes sense to burners, teams and folks executing the ground work. Basically, there is a need for sub-committee's and FENWT to explore how to package gridded data information. The groups need to keep in mind that NFDRS is a valuable low-resolution tool that demonstrates longer term fire danger and "big change" situations important to many. Rick also highlighted that grids allow weather forecast tailoring at appropriate scales. The primary shortfall of fire danger today is that it still doesn't model live fuel moisture very well. Other technologies, such as gridded weather and satellite imagery, may help this problem. Also, training is needed for management when is comes to grids.

Action: Pass on to the FDC the task of assuring that the needs of the field-level user are met with regard to gridded data and NFDRS.

#9: Limited Intervention and Automation (led by Paul)

The FDWT vision statement uses the phrase "limited human intervention" describing the data systems involved in NFDRS. Given the transition to FENWT, the onset of gridded data inputs, and the implementation of the 2000 RAWS standards, it's appropriate to consider our intentions and this language again. The new FDC may want to consider its own focused Vision Statement.

Larry provided a background on the "Nelson Model" and its association with the Oklahoma mesonet. By March, WFAS will be displaying automated moisture fields.

The need for quality control and human interaction with the system is real and important. However, the quality of human intervention is questionable. Having a "hands-off" system would require an artificial intelligence link necessary to check the data. The WIMS re-engineering effort needs to include this functionality along with special care to create "trusted" data. The cost benefit of the RAWS station standards was expressed to NWCG and state/private foresters based on expected efficiencies gained by an automated system where dispatchers did not have to enter/edit data. Automated data QC such as in ROMAN was discussed. There are very few folks correctly assessing data such as state of weather. There is a switch occurring from a clerical duty to a management oversight responsibility concerning human intervention. "Focused human oversight of an automated system" is important to this issue and could be appropriate language to replace "limited human intervention" in any future vision statement. There are other automated

systems to quality check weather observations such as the ASCADS "watchdog" program. Another automated ASCADS report is the "offline stations report" which monitors RAWS that have quit transmitting.

Discussions followed on automating weather data flow into the WIMS systems and hence to NIFMID, to eliminate the need to manually set "state of the weather" (SOW). A commitment was made to start testing, in fall of 2005, to automate the SOW based on the solar radiation sensor readings from the RAWS. Potentially if testing goes well the rest of the RAWS stations in the US would be fully automated sometime in 2006.

Maintenance is directly tied to all this as recommended by the RAWS Partners Group. There seems to be a longer term need for the FDC to pursue the issue of focused human oversight. The more immediate goal is grasping what is needed with expectations of the field. Are any recommendations regarding automation possible and feasible?

In the "WIMS background," hopefully comparison graphics can be generated comparing automated with non-automated. Fall implementation is feasible. Jeff highlighted that this is going to produce substantial changes. The timeline depends on the comfort level of implementing these changes. A parallel process may be necessary and appropriate to evaluate the current and new processes.

If the user is not touching the data and a sensor does go bad, how will that be identified? What will be in place to make sure the data does not get into the system. The FDC has to identify what will be the mechanism to make sure incorrect data is identified. This is all part of the automated QC process that is needed. For NFDRS to work in the future, a totally hands-off system must be developed. Currently for many stations, green-up is arbitrarily entered. The intent of new work by Matt Jolly is to get away from this. Wayne suggested the Southern CA GACC as a testing site.

The discussion progressed to stations and/or data not meeting standards. Will there be the accountability and the mechanism to shut down bad sites? The management implication is the lack of a figurehead that has authority to take steps to eliminate bad data and to remove access to stations with bad data. Keeping the bad data out of the system is extremely critical. Could there be an ability to selectively shut off a data element while the rest of the station elements run?

Question was posed about tracking users of the data. Is there a mechanism to identify who is using RAWS/NIFMID data? Some web applications such as ROMAN can track these hits. If we can get a handle on the scope of the use, it would be vital.

The NWS operates a system that monitors observations 24/7. The monitoring center calls the local office and the technicians are notified. Maybe this could be a model. Heath suggested leveraging ROMAN QC functionality in future fire weather system discussions.

Action: Recommend the FDC address issues of automation. 1) meet the immediate expectations of the field as a result of the NFDRS RAWS station standard implementation; 2) develop and implement an automated QC mechanism for NFDRS data inputs

Action: Recommend the FENWT develop a weather data quality standard.

Action: Recommend FDC track the use of WIMS/NIFMID data.

Action: Recommend FDC explore options for agencies to restrict access to stations with data of unacceptable quality.

#10: Communicating with the NWS concerning WIMS

Changes have occurred over the years through modernization concerning products of the NWS AWIPS system. Product headers and other details have been changed, leading to recent communication breakdowns. NWS changes were made, but notification to WIMS did not occur. There is a 1993 operations agreement with WIMS and the NWS. Jeff proposes updating the service level agreement or the 1993 document to return to smoother operations. Issues like naming conventions can be explored along with a standard operating plan. C & A security concerns can also be updated in the service level agreement. Jeff asked if Rusty could work with him to develop a new agreement. The change in late 2004 for the NWS was rare, but still may require this update. Service change notices are used by NOAA for changes to data transfer.

Discussion focused on the utility of storing weather forecasts in WIMS. FDC should explore who is accessing weather forecasts and other NOAA forecast data in WIMS. Could some of the data storage be discontinued because other sources of access have come to dominate the dissemination process?

Gary also brought up issues of communication on a broader sense with the NWS. Gary mentioned not having access to comment on proposed NWS policy. Rusty explained that at the end of fire season, WFOs are asked to ask customers what changes should be made. These changes not only have ramifications for the fire program but also the public program. An assumption is that the WFOs communicate with all the users. Does FENWT and the FWC corporately view changes and assure appropriate local, national and regional comments? The AOP is an important mechanism for these communication issues to be resolved. Areas need to have policies for notification and change procedures spelled out in their AOPs. The FWC needs to ensure the AOPs address these policy communication issues.

Action: Jeff and Rusty address NWS/WIMS communications shortfalls.

Action: Recommend FDC analyze whether or not NOAA forecasts should continue in WIMS.

Action: Recommend FWC ensure AOP to addresses communication related to proposed policy changes.

#11: WIMS Re-engineering Task Group

Question: Does it need to continue? There is a feeling in the Forest Service that it is still needed. The pace of the re-engineering process is much slower than anticipated, but the interagency, field-level evaluation of changes made to WIMS is valuable to the process. The role of the task group may also be important to FENWT's task of proposing a fire weather system. The role of the group evolved as the funding for WIMS Re-engineering was constricted. There is a limited group of folks who are "power users" that drive the system. But updates and development have been incremental, making the group's efforts more difficult. The oversight of subject matter experts still need to be in place. As the FDWT sunsets, so too must the WIMS task group. The new FDC needs to identify a new approach and a possible new task group. In the interim, Mike Barrowcliff and Jeff may continue to call on the individuals involved for input.

Action: WIMS re-engineering task group under the FDWT is terminated.

Action: Recommend the FDC assess the need for interagency support for on-going WIMS development.

#12: The WIMS Service Level Agreement

This is an unresolved item from a previous meeting, but may be a non-issue at this point. Evidently, nobody has received this Agreement. Question: Concerning continuity of systems, if WIMS goes offline over a long timeframe, how long would it take to create/implement a replacement system? Is this part of the review of the Service Level Agreement? It should be reviewed.

Action: Recommend FDC resolve the status of the WIMS Service Level Agreement.

#13: WIMS/WFAS/ASCADS future

This topic began with a review of the status of the various systems. Resolution of this issue has been tasked to FENWT by NWCG.

Herb reported that according to Greg Jensen it has been 3 to 5 years since the review was made on ASCADS. The price was high for the re-engineering so efforts halted. Since then, efforts kind of came to an end.

Jeff: FAMWEB migration is in final stages. The old servers will be mirrored and stored for redundancy purposes. Test phase will be in February with production starting February 25th. There will be a WIMS application review for fine-tuning. Solar radiation

is also an issue to be handled by fall. The WIMS task group helped in testing the applications. The NIFMID query is back on line for users to evaluate. The cost is reasonable but justification and feedback is still necessary. It was the hope that the power users and task group would provide this feedback.

Larry: Implementation of the Nelson model will be started this month. The progression is rather quick. There may be a prototype released online sometime in March. Pat Andrews may become the project manager for WFAS where she will work with Matt Jolly for enhancements. WFAS for the most part is low-maintenance. Missoula is still serving various products to the Geographic Area Coordination Centers (GACCs) and other users.

Other systems – ROMAN, WRCC's climate products, FX-Net. All these systems will be addressed by FENWT.

In Orlando, an action was initiated to assemble and review perspectives on advancements of ASCADS/WFAS/WIMS and related systems like ROMAN. In April, a team assembled to produce alternatives and recommendations. A white paper on ASCADS/WIMS/WFAS was drafted but unfinished due to the effort to develop the FENWT proposal. The draft white paper still has valuable material, but FENWT should revisit the effort in the context of the NWCG assignment. The consensus opinion in the white paper was to integrate existing systems, building on what we have rather than starting over. The paper has not yet been presented anywhere, it remains a draft idea. So question was posed, what is the next step? Hopefully both the FWC and the FDC will review the document and approach FENWT with ideas. Resolution will involve all of FENWT's subgroups.

Larry – Weather data is the life blood of the agency organization and it's extraordinary how well it works today. Investment to keep it going should be considered, keeping in mind the future. Budgets of course are slim. But, continuing costs of just keeping it going are big in itself. What is needed is a review of the entire fire weather program including systems and the tools needed for RAWS and Predictive Services. Differences should be pointed out on those systems that are out for mass consumption versus specific tools for land management staff…like ROMAN versus FX-Net. Costs need to be mapped out, from status quo to full updated systems. And, all groups have an interest in these systems.

The ASCADS/WIMS/WFAS white paper was distributed for use by the future committees as they see fit. See Attachment 7.

Action: Recommend FDC prepare briefing to FENWT on fire danger rating perspective of the fire weather systems issue.

#14: Pocket Card Update

The fire danger pocket card website was initiated and has been maintained by the FDWT. This role needs to pass on to the FDC.

NWCG approved the pocket card standard last spring. The standard is posted on this website. As of January 2005, only cards meeting the standard are to be posted there. Communication to this effect has not been sent to the field level officially. FENWT needs to work with NWCG to get the communications rolling as soon as possible.

There may be some misinterpretation on the requirements of pocket card distribution and the briefing content requirements at the Incident. Gary made the point that fire danger can be mentioned along with fire behavior…even in a training setting. Question is what is the policy for pocket card implementation and where is it located? For the Forest Service, it is in the checklist for line officers and also in the red book. Wayne asked about state jurisdiction and pocket cards. Is there liability if a FS employee is on a state fire and no pocket card is provided? NWCG wrote the standard to apply to those who choose to implement a pocket card. NWCG did not require all agencies to use them.

Discussion continued over the display of large fires on the card. Misapplication and training are issues. The trends are the important highlights and should be what is emphasized. Is this message being lost? Could these details be added to the website or in the communication from NWCG? The FDC needs to address this and bring it to FENWT for resolution.

Action: Recommend FDC advise FENWT on drafting communication from NWCG to field regarding the implementation of the Fire Danger Pocket Card Standard and on possibility of pulling back the due date on the website to reflect time needed for field to address communicated instructions.

Action: Recommend FDC review and verify agency policy documents referring to Fire Danger Pocket Card.

#15: RAWS Station Standards Revision (led by Kolleen)

There were two significant changes proposed to the Standard revisions. A reset of the precipitation gauge during a rain event can interfere with tracking accurate data. The data logger could be reset on a specific date documented in WIMS and ASCADS. The policy is that the logger should be reset. The second part is making sure that the reset isn't done during a precipitation event….that would take human intervention. A recommendation was put forth to standardize the date of reset. Since there are larger issues in station maintenance, the decision was made to leave it as is and incorporate the change. Also, will all the data loggers roll over? Can FDC find out?

Thanks to the RAWS Partners for doing the groundwork on the weather station standards revisions!

Action: Approve the proposed changes as recommended by the RAWS Partners Group, subject to FWWT approval.

Action: Recommend FDC investigate the performance of the data loggers regarding roll over of accumulated precipitation value.

Action: Recommend FDC remove the RAWS standards posting from the FDC (currently FDWT) website and replace with a link to the Forest Service RAWS standards page.

#16: RAWS Partners Group (led by Rich)

Rich McCrea presented information on the RAWS Partners Group. He identified the members, scope and goals of the group. RAWS maintenance is a primary topic for this group. Other projects were station standards updates, a BLM MOU for spelling out responsibilities and statements of work and budgets.

Gary asked about Partners Group and State involvement with regard to RAWS contracts. The contract process can work for the States too with the help of the RAWS Partners Group. This could save money.

BLM RAWS group vision is a central source of contracting for standardization, economic ease, less confusion and reduced costs of setting up contracts. Long term vision has to be determined to clarify issues of capacity and any private involvement. A report is supposed to be submitted on these issues by the end of September 2005 to the Fire Directors. RAWS maintenance cost is also a large issue.

ASCADS was discussed. It is not owned by the RAWS Partners Group.

Issues:

1) Since a 1999 inventory, the number of stations is growing at a rate of 150 stations per year.
2) Acquisition, maintenance and workload for Herb's shop are growing but staffing is nearly the same.
3) There is no formal process to screen for "overlapping" stations.
4) The field has to take responsibility for dealing with new stations they believe they need.
5) Alice Forbes is expected to task FENWT in identifying issues on "overlapping" stations and field problems.

Declining budgets as stations are added will likely require holding back more money at the national level to properly maintain new stations.

Fire plan money placed more emphasis on getting stations, than planning for them and not the other way around. This funding source has resulted in many new stations with states.

Question asked on complete outsourcing of maintenance. This is being examined at the BLM and it is conceivable that this could happen. The idea of contracting inspectors was discussed.

Bottom line is that there is a feeling at the Director level as to how many stations are enough? Do we really need more is what they are asking.

Dick covered the NPS procedures of addition new stations and also maintenance lists. The national office control of the program is the key to confirming station need and a maintaining a true inventory.

Action: Recommend FDC present to FENWT in March the fire danger perspective regarding RAWS (station numbers, station network, maintenance).

#17: Fire Weather Center (led by Rick)

The Western Governors Association (WGA), working with NOAA, starting a drought monitoring system called NIDIS. This report opened a door for continuing a relationship between NOAA and the WGA. NOAA and WGA decided to evaluate a Fire Weather Center concept. This concept morphed into examination of the whole fire weather program. Top issues were:

1) NOAA's strategic plan for fire weather and fire weather as core mission of NOAA.
2) Organizational opportunities…like needs assessments.
3) Research and tech transfer.
4) Monitoring and evaluation.

Another WGA meeting will be held in Boise next week (February 8-9).

A report will be generated with a deadline of June 2005 as a result of these meetings to be presented to the WGA. The question was asked for dissemination of information to groups like FENWT and the FDC. The WGA limits information distribution to a wide array of groups to keep to deadlines. A very specific proposal in this case became very general in nature….from strategic vision to outputs to almost everything. A needs assessment may result from the project. This would be quite valuable.

Future technology may drive towards more spatial and temporal information. Mapping fuels is also becoming more specific. Wayne suggested that getting the gridded data sets to improve micro-scale modeling of weather and fire behavior is important and could be handled by a center.

Better research coordination and assigning research priorities need to be collectively determined. Could FENWT do this in the absence of a Fire Weather Center? Rick proposed that FENWT may be able to facilitate this prioritization process. Remote sensing is also an issue and could be missing from the discussion at the WGA meetings.

#18: NFDRS Training Curriculum

Another item pending from 2004. The FDWT asked the NFDRS Steering Committee to identify what a NFDRS training curriculum might be. Good work was developed after South Canyon, which recommended among other things including fire danger training in other coursework. This process is starting to happen.

Action: Paul will ask the NFDRS Steering Committee to finalize their effort to recommend a fire danger training curriculum at their May meeting and report back to the FDC.

#19: New NWS policy on optional wind speed location and time averages.

Concern was expressed over a need for consistency on wind speed. The AOPs should spell out which one is used: 20ft -10 minute or 33ft – 2 minute. Whichever one is used, spell it out so that users know what is being forecast.

#20: FDC proposed charter development

The opportunity/task was discussed to develop a proposed charter for the FENWT March meeting. Content was added to the background, purpose, objectives. An objective was added related explicitly to training.

The relationship to the NFDRS Steering Committee was discussed. That committee exists solely to present the Advanced NFDRS course at NAFRI.

Desire to improve the communications coming from the FDC was discussed. Strengthened language on communications in Purpose and discussed emphasizing it in committee operating plans.

Membership was discussed in broad terms, emphasizing practitioners, program leads, and specialists of NFDRS, full NWCG representation, and NWS representation.

Consensus management practices were considered for inclusion in operating guidelines, not the charter.

See draft FDC charter in Attachment 8.

Action: Members review draft charter. Provide comments back to Larry Bradshaw before February 28. FDC present draft charter to FENWT at March meeting.

#21: Closeout

Heath was commended for the great job he did taking the notes of this meeting. Capturing some of the detail of the lengthy conversations about some critical topics was an important objective of this meeting.

Many individuals have dedicated a great deal of time and effort to the FDWT. Their efforts were acknowledged on behalf of NWCG.