

FIRE EQUIPMENT WORKING TEAM MEETING
APRIL 20-22, 2004
SAN DIMAS, CALIFORNIA

Tuesday, April 20

Members in Attendance:

J.P. Greene, USFS
Robert Stroud, BLM
Bill Hicks, GSA
Dan Lang, CDF
Ken Lydy, BIA
Kirk Bradley, Michigan DNR
Roger Spaulding, USFWS
Ralph Taylor, SDTDC
Ricki Miller, USFS
George Jackson, MTDC
Tory Henderson, USFS

Absent Members:

Kim Christensen, BLM

Guests:

Allen Deitz, NWCG
Brandon Cichowski, USFS
Pat Ward, USFS
Jay Miller, USFS
Sue Zahn, SDTDC

Gary Morehead, USFS
Dennis Davis, MTDC
Dave Haston, SDTDC
Dave Clement, USFS

Introductions:

Ralph welcomed all of us to the Center.

Tory is now married and her new name is Tory Henderson. She serves as the Branch Chief and is the chair of FEWT. J.P. Greene is in a new position as the Southern Area Coordinator.

Additional Agenda Items to be added:

- Kirk Bradley - environmental cabs.
- Robert Stroud - manufacturing standards which is a performance standard
- J.P. Greene - Small Business Innovation Research Program (SBIR)
- Tory Henderson - Logistics Committee Request

Web Page Redesign

Tory worked with Allen Deitz on the web page. Allen presented the design and we discussed what we want and how to manage the web site and that Tory doesn't have to be the one to manage the page.

Mailing list needs to be updated with all the new people. Use a new layout for FEWT with buttons and bullets. People are having a difficult time getting in to the web page, but it is being worked on.

Brochure on the FEWT done by San Dimas needs to be updated. Discussion followed on what we want to keep and the redesign, etc.

Survey presentation needs work. Need information on background.

What items do we want on the web page: navigation buttons on each page; related links format; duplication of links; the order they appear on the page, alpha or most current; FAQ's, what to put there; what needs consistent answers; information should be proactive; how to handle questions. Answer from FEWT or a contact person; one person to answer e-mails with one address under contact; e-mail address is not linked. Colors are an issue for buttons on the side. Need links to Tech Centers, GSA, Roscommon, and FAQ's.

SAFENET being used for radios being revamped, should it show on this web page?

Are links to other working teams different? A few are using this format. Now is the time to set the standards. Information on rosters is not consistent. Some teams do not have rosters and some addresses are wrong which causes problems.

Split work up so one person doesn't have all the work.

Known Links we will have:

- Technology and Development Centers (T&D's are password protected will provide the password)
- Roscommon
- GSA and GSA catalog
- NIFC
- NICC
- CDF
- BLM equipment
- SAFENET
- FEMA
- CIIFC
- PMS
- WFCS

The working team is responsible to archive documents. Some archives are kept off. Some teams drop notes when they add new notes, some keep everything. May archive documents.

How do we want the work to be done? Will test this summer.

Create site for engines to show ones established and add interagency as they happen.

Add specifications on T&D. These are already on GSA sites. Link to GSA library

Link Identification:

The link will consist of a short title, the URL, and a short description that provides the user enough information so they can determine if that is a site they want to visit.

ACTION: *Tory will develop links and submit to Allen.*

Robert Stroud and Dan Lang to submit site links to Tory.

JP will provide dispatch side and any state sites by the end of next week.

Brochure – do we want to keep only on website? Summary document with links would work, which would cut the maintenance issue and introduction information would not have to be changed. Incorporate brochure into web page.

ACTION: *San Dimas will put together by April 30, 2004. Sue Zahn will accomplish this.*

Schedule of meetings posted as well as meeting minutes. Information should be obtained within three clicks.

Establish a contact list so users have an opportunity to make contact with an individual that might be able to answer questions (Subject Matter Expert). Should identify one for each agency, as well as some specific categories:

- Ignitions information on aerial or ground.
- Spark arrestor
- Hand tools (Dennis Davis)
- Coordination and Dispatch (JP Greene)
- Water Handling (Dave Haston)
- Others as we identify them

All other issues on web page will be handled by Tory and Ricki.

Link to submit a proposal with a separate section for ideas.

ACTION: *Robert Stroud will send form he has been involved with developing in two weeks.*

Should establish a process where an individual can submit “Hot Topics” and burning issues. Button for issues and problems with button to click to link the contact.

Allen will work up a mock page for us

June 1st look for off line display. ***Bring issues and concerns to fall meeting.***

PMS Review

Revising guides is a real headache. There is a need to look at alternatives. We need a better process. E-mail process is the best way to deal with the issue. What is the best way to get people together? Each team is asked to submit a plan to the publication team for publications to be reviewed. Some of the supplements to the publications can be on line. Water handling has a standing committee. There is a five-year cycle for hard copies, with a review every year.

Reviewed FEWT’s publication they have responsibility for:

- PMS 330-2, JPR Guide for NFES Cache Positions: Tory will check with Cache Chair
- PMS 409, Su Refugio de Proteccion Edicion 2001: will maintain until old shelter is phased out
- PMS 411, The New Generation Fire Shelter: will maintain both hardcopy and electronic format
- PMS 414-1, Firefighter’s Guide: referred to TWT last year, Tory will follow-up
- PMS 430-1, Spark Arrester Guide - GPL: will maintain both hardcopy and electronic format
- PMS 430-2, Spark Arrester Guide - MSE: will maintain both hardcopy and electronic format
- PMS 430-5, Introduction to Spark Arresters: will review
- PMS 440-1, Interagency Retardant Base Planning Guide: being posted to SDTDC and MTDC instead
- PMS 440-2, 10 Principles of Retardant Application: will review and update, electronic posting only
- PMS 444-1, Lot Acceptance, Quality Assurance and Field Quality Control for Fire Retardant Chemicals: will review and update, electronic posting only
- PMS 445-1, Introduction to Class A Foam; PMS 445-2, The Properties of Foam; PMS 445-3, Class A Foam Proportioners; PMS 445-4, Aspirating Nozzles; PMS 445-5, Compressed Air Foam Systems; PMS 445-6, Tactical Applications/Class A Foam: the T&D centers and Robert will review and make a determination: update and maintain either electronic or hardcopy or both, or eliminate altogether
- PMS 446-1, Foam vs. Fire: Class A Foam for Wildland Fires; PMS 446-2, Foam vs. Fire: Primer; 446-3, Foam vs. Fire: Aerial Applications: the T&D centers and Robert will review and make a determination: update and maintain either electronic or hardcopy or both, or eliminate altogether
- PMS 447-1, Water Handling Equipment Guide: supplement electronically on web, hardcopy only publish every 5 years

- PMS 447-2, Wildland Fire Engine Component Guide: update in 2004
- PMS 448, Fire Equipment Storage and Refurbishment Standards: revised 2004 and published; review annually with revision as necessary; discuss at fall meeting
- PMS 449, NWCG/NFES Catalogs: work towards creating Part 1 in an electronic format
- PMS 466, Wildland Fire Hose Guide: will be published this year
- TS 256, Cache Demobilization Specialist: cache managers have lead, Tory will follow-up

Sue Zahn will look at the Wildland Fire Engine Components and the fire hose guide along with the standardization guide to see if we are duplicating information. There is a definite need for the engine standardization guide.

Allen would need a word document in pdf format for the web page. Publications should not be in PMS unless it is used for interagency needs and made available to the entire fire community.

On the issue of hard copies vs. CD, more CD's are being used at this time.

NFES Update

The NFES meeting notes were reviewed by Ralph Taylor. Leslie Anderson will replace George Jackson when he retires. The blue fire line pack is approved. Bullard hats are available in red, white, and yellow and available in the GSA catalog. The new seven dollar goggle is also in the catalog. NFES 0300. The retrofit for the swivel is being worked on by SDTDC. Testing on the Type II hose will be done soon. Mark III pump has been requalified and the pump for the remote location system failed the 100 hour test. Southern Mills has the material to make the fire shirts, so we should be in good shape there. It was decided to keep the current number of veggie MRE's. Cache memo will be issued in regards to the tents. Kim has contacted the Health and Safety group in regards to flagging/ribbon as to what we want. Dennis Davis reported that the combi tool will be looked at again and for the need of replacement parts. Different size balls were being used on the wye valves. It was discovered that we mixed up the replacement parts on this item. Testing on in-line valves continues. The fuel can testing is ongoing. Need a contract of hot food containers. Multiple contracts should be issued for critical items so we don't have problems like the fire shirts.

Camel water packs are in the system and are being used. The concern is when fire fighters stopped to drink from a canteen it allowed a rest period for them.

Kim to follow up on the old style jeans.

There will be a national order for the new fire shelters and FEWT will draft memo.

Cache chairperson was tasked to get numbers of the hot line hose to Tory.

Fire Equipment Storage and Refurbishment Standards Publications (NFES 2249) – the process for updating does not appear to be working. Will be a topic at the cache managers meeting for potential resolution.

Kit Committee – the Kit Committee will present their suggestions to the Cache Managers.

Impact Cards vs Credit cards are an issue with States.

Medical Kits – the Emergency Medical Services Group (EMSG) is starting to move forward with their tasks.

Discussion was held on the timing of the wild fire conference.

Proposal to establish standards for Aircraft Rescue Fire Fighting Trucks

The Interagency Helicopter Operations Guide identifies that the aircraft rescue fire fighting truck is not required. Contracting community is asking for a specification in order to establish rates. Aviation needs to change the standard in IHOG if a requirement, however should work individually with local contracting officer if necessary. FEWT does not support establishing an interagency specification through them at this time. Aviation community may provide a standard to contracting officers for use.

Quarter Turn

We need to do another inquiry. GSA made the fitting available. Per Dan Lang the Western Fire Managers are against this. Some states are already converting. If GSA stocked both would be viewed as a negative. It will be cheaper in the long run for all parties and move us toward modern technology. Okay for federal agencies to implement but may be a challenge for state and local fire departments. The adapters will work for those who choose not to convert. Need to survey the International Association of Fire Chiefs and other cooperators and include a strategy for implementation. Objective is to identify any issues from all parties, including funding. Will work to include a funding strategy if the decision is to proceed after all information is obtained. GSA would stock all necessary equipment.

Currently testing with two engines, which are fully loaded with quarter turn. Any changes necessary based on the test will be handled with a specification change. We should identify if a survey is necessary after initial information is shared. **Review and update the implementation plan and have to Tory by June.** The feeling of the group is to proceed with the inquiry to the field and NWCG and utilize the current implementation plan. The engine group is working toward quarter turn and would like to complete it as quickly as possible. Tory will speak to Don Artley in regards to proceeding and contacting NWCG. Dave Haston will be available to Tory if she needs any assistance.

Retardant Update

Tory gave an update on the retardant contract. Protests have been filed and denied and now is in the court of claims. All appeals have been won by us with the exception of the burn testing. Judge to issue a bench letter by April 23, 2004. If the judge finds in favor, all products will go through the burn test.

The Forest Service is also being sued by FIRE-TROL and we have filed a motion to dismiss.

The Forest Service ethical group has filed a lawsuit stating that we did not do NEPA for the use of retardants in fighting wildland fires. We are currently pulling together all documents pertinent and will provide the list to the Plaintiffs. Preparing summary judgment and uncontroverted statement of facts. We will receive the Plaintiffs the week of July 5th.

Wednesday, April 21, 2004

Potable Water Standards

A request was received from the National Contracting Office to develop potable water specifications. Potable water trucks are an issue on incidents, and apparently some states do not have regulations. However, there are federal regulations (USDA), as well as State. Due to that, we will contact Safety and Health Working Team about the federal specification and requirements as the preferred option, however this will not be done until the specification is reviewed by Tory.

ACTION: *George Jackson will find the USDA requirement and send to Tory. Tory will review and determine what should be submitted to S&HWT.*

Logistics Committee Request

Logistics committee is a formalized group and wants to be recognized by NWCG. They would like to be a sub-committee. Tory asked the FEWT members what they feel about them having a standing committee. Tory requested the logistics lead to write a proposal and submit it to us by our fall meeting. NWCG will have to approve the request, and it may be better suited for a working team. The equipment side could be handled at the Wild Fire Conference to deal with issues the logistics community identifies. Will submit to NWCG for decision.

Small Business Innovation Research Program (SBIR)

J.P. Greene provided a hand out on SBIR. SBIR has been awarding research and development projects since 1983. Since SBIR funding for fire is on the increase this could be a way to do some projects. Look for individuals to sit on as Ad-Hoc to review projects. (<http://www.csrees.usda.gov/fo/fundview.cfm>)

Environmental Cabs

Kirk Bradley spoke about environmental cabs. The companies' publications infer that they may be a safe place to be during a burn over. While some companies have put extensive time and effort into their tractors and cabs for fire suppression use others have not. Is there any comparative information available for agencies? Some states are moving toward these cabs. At first an external temperature warning system was being installed but it appears this is no longer the case. An email was circulated last fall about two tractor operators that stayed in their cab during a burn over. Training of the operator is very important to the issues of fire behavior. Safety must be first. Is there any group looking into design parameters of performance requirements for these cabs in fire conditions? Is this something the FEWT committee should pursue? Burn over test for engines have been conducted by the USFS, is there a possibility of something similar for tractors? Kirk will work with MTDC to write up a proposal for the steering committee to review as a project. J.P. would like to see comparisons.

Joint Meeting with the Federal Laboratory Consortium

THE FEDERAL LABORATORY CONSORTIUM VISITED THE GROUP AND THIS POINT OFFERED WHAT THEY CAN DO FOR THE WILDLAND AGENCIES. INTERESTING PRESENTATIONS WERE GIVEN BY SEVERAL OF THEIR PEOPLE. GENERATED A LOT OF CONVERSATION EXPLAINING WHAT WE DO. (Notes attached at the end.)

Agency Updates

J.P. Greene:

The use of ATV/Drip torches was shut down in the Southern Area. It is the firing tool of choice. Now permitted with new safeguards.

Robert Stroud:

The BLM ATV/Drip Torches and heli-torches have been refined. ATV firing device has become a sealed vessel. There is training and operation standards available. There is a broad spectrum of equipment available.

BLM extreme engine fits in and goes into areas that are difficult to get to. The tender would go on the line instead of the engine. They have a 2,800 gallon water tender available so that engines don't have to leave the line.

Bill Hicks:

The new catalog is out. They are currently modifying the existing contract for fire shelters for retrofit and production. Fire shirts contract has not been awarded, but will be soon. One vendor should have 60,000 shirts for us. There is a new tool catalog. Bill explained the GSA Expo is mainly for contracting people and vendors.

Dan Lang:

The State of California budget is a challenge and money is being re-directed. 40% of the engine fleet is obsolete and 10 engines to be purchased as soon as possible, but things are not looking good. They will have 19 of the S2T tankers in service this year, and 4 of the older model S2As. There will be 10 CDF helicopters in California, including a new one in San Diego county. There is a reduction of Conservation Camp hand crews because the California Youth Authority has pulled out of several of the camps. CDF will have eight CDF-only retardant bases: 2 full service and six bulk bases awarded. As a possible way to reduce the amount of retardant jettisoned each year, CDF is considering having their air tankers go out with water on the first load, or down load retardant, and then have the IC determine what the second load will be.

Ken Lydy:

The BIA is without computers again. BIA took over running the model 52 engine program and is located at MTDC. Money looks okay for this year. BIA has

followed our standards of our red book. Physicals are a big issue and they are working hard on them. They are moving toward a national policy.

Kirk Bradley:

There is a budget crisis in many states. Michigan for example is close to 2 billion short this year and expects similar shortages next year. The Roscommon Equipment Center web page has added several items of interest including photos, basic specifications and contact information for equipment transport units used by many wildfire agencies. The information is there for other agencies to review. All agencies are welcome to submit information about their transport units for posting on the site. Kirk indicated he has concerns about the safety aspects of using a single person ATV with a ground ignition device. Trying to light a line and negotiate around or over obstacles may be too much and may result in PI accidents. On the issue of quarter turn, 14 plus states have already converted, some states very much against the change, and many are indifferent for varying reasons. Many of the northern states deal with the Canadians more than the USFS so it doesn't matter too much to them which way the USFS goes on this. Other states do not use very much hose so it is not as much of a concern for them either. Discussed a batch mixed ground application system for long term retardant on a FEPP 6x6 engine developed by the Michigan DNR.

Roger Spaulding:

The Fish and Wildlife Service is waiting to see what happens with the terra-torch project. They are limited in what they are doing at the present time. There is a need for better fuels mapping and to prioritize the treatments. Also need to monitor the process so they know if it is effective. Their budget is also a challenge. They took a hit in preparedness.

San Dimas Technology and Development Center:

San Dimas reported that there will be field testing on using just the ¼ turn this season. In line "T" with the 3/8" orifices didn't work. There is a revised specification on the new nozzle and it now has five times more volume. Are there safety and performance issues? If a safety issue exists, a SAFENET should be filed and it will make its way through the system.

Type II hose specification is a tough one. Used performance specification of the Hot Line to develop a design specification, which created the challenge.

The ember separator project has had very good cooperation between agencies. Ralph Gonzales has all the information on sizes and procurement places.

BB4 pumps being used on the remote starting system had good results in the field testing but it didn't pass the 100 hr test. There will be two pumps per fire cache when approved. Need to ask FEWT for help with the procurement.

The fish strainer is be stocked in the fire caches. They are \$60.00 each and being made by a student in Montana.

The video of the model 62 is being worked on. Region 5 requested that they just do a module at a time. BLM is working on a DVD and a CD for basically the same concept for maintenance of the model 52.

Ralph Taylor will retire on April 30th and Sue Zahn will be acting for Dale Dague. Ralph Gonzales will be acting in May and Dave Haston in June for Ralph's position.

George Jackson reported on the new fire shelter problem of tearing after shaking it out of the bag. It will be retro fitted and the cost will be about \$15.00 per shelter. They are also working on a shelter for tall people.

Night vision goggles are being looked at for better ways of fighting fire at night.

Combi-tool has a new contractor and for the shovel which may come from Ireland or England.

National – Tory Henderson:

The driving standards are out and the standard for the Forest Service goes beyond the NWCG policy. Forest Service policy will affect interagency support on fires relative to vehicle operators. Vehicles under EERA's are not considered a leased vehicle. People must have a defensive driving class every three years, plus additional requirements.

Additional chemicals are being submitted for testing. They have been asked to look at products for buckets. Draft specification for water enhancers is not complete.

Ground Ignition Task Committee

The ground ignition committee is moving forward. Robert Stroud has received a letter with names and has contacted each person but felt he needed some direction from FEWT. Lots of things going on and need direction on what to do first. Task books, standards, and training need to be established on the batch mixers. Need to identify what is out there and how it works before putting the task book together. The committee needs to start to look at aerial guide first and try to develop from there. Look at ping pong ball machines, guns, etc. They also need to do draft a charter and submit for review and approval to FEWT.

Thursday, April 22, 2004

FEWT October Meeting Notes

George hasn't done the comparisons on the survey but promised to get it done as soon as he can get to it.

J.P. Greene will stay but as representing the Dispatch community. Tory has asked for a replacement of J.P. from the States, preferably one with aviation background. There has not been a representative identified from the National Park Service. **Tory will send the NPS a memo requesting a nomination.**

We need to create a mailing list for the states. Dan Lang asked how the information flows to states and should he be passing information on. Kirk said he has a mailing list of 50 people. Kirk will continue to pass information on but Dan should share information from the Western Fire Association.

Camel Back Products

We have stayed away from supplying camel back products due to a variety of issues, specifically a canteen or bottle of water provides a short break when a drink is needed. However, we will evaluate a variety of products and provide the information. George Jackson will do a tech tip to incorporate on camel backs and give to Brian Sharkey. JWOD is now manufacturing for the military. Carbohydrate drinks are being evaluated.

Standardization

Typing standards were not changed for the Type III engines. We support going to three individuals on the engine, but didn't change the minimum. Tory will touch base with Don Artley and find out what the dialog was at the NWCG meeting relative to this proposal. Dan has production reports on having three people on an engine. It only affects the dispatch of engines. Each geographic area can make the adjustments as they see fit.

We are being asked more and more for specifications. Do we need to do a briefing paper addressing the issue? We need a standard so we know what we are getting. CDF developed a specification for dozers and it is growing. We need to develop what we need first and not let the contractor do it for us.

FEWT could act as a clearing house to see what others are doing. Should FEWT review the contract specifications? Creating the specification as performance based would eliminate poor performers but first we need to develop a standard so we can evaluate the proposals. We need to put together a comparison of standards from each geographic area so that we can see what is out there. There is information out there to create a minimum standard and will need to fine tune how the performance issues flow back to the Engine

Subcommittee so that specifications can be developed for equipment. **Tory will ask a contract person to gather info for the next meeting.**

PRESENTED RALPH TAYLOR WITH A PLAQUE FROM FEWT IN HONOR OF HIS RETIREMENT.

Manufacturing Standards

Robert Stroud has been working with 1906 manufacturing standards and they are leaning toward a performance standard. 1906 doesn't meet our performance standards. We need solid representation with NFPA and we need to develop a standard. Engines are self certified and are not done by a third party. We either take on 1906 or write our own. There are some positive parts to 1906, but there are also negative parts relative to a wildland fire engine. Comments are not published from the ruling committee. The committee needs to know that this not a good document.

Adjourned the meeting at lunchtime

Engine Standards within the Forest Service

The Forest Service has not established a Forest Service wide standard for engines. Several geographic areas have requested working toward a service wide or an national interagency standard. The critical areas needing attention and discussion were identified:

1. Lighting Standards – manual direction needs to be researched. Identify a standard for review by the field that would include lighting requirements for crew carriers, engines, tenders, duty officer vehicles, and other support vehicles.
2. Numbering Standards – review what regions have in-place and then develop a recommendation. This would become part of manual direction once approved.
3. Striping Standards - review what regions have in-place and then develop a recommendation. This would become part of manual direction once approved.
4. Equipment Box Location – conflicts with light bars and must not block view. Again, review what regions have in-place and then develop a recommendation. This would become part of manual direction once approved.
5. Engine Standards – identify items in engine guide and field needs. Develop proposal based on this information for standards. Apparently there is a need to have an engine more capable of both wildland and urban interface fire fighting.

There are several positive items, as well as efficiencies that would be gained from standardizing at least within the Forest Service, but would like to establish the standards that would be accepted by all federal wildland agencies:

- Fleet management
- Maintenance
- Purchase prices
- Training
- Utilization

Tory will gather information from the Forest Service regions represented at this meeting and summarize. It is apparent the FEWT Engine Subcommittee should be activated again. This will be a subject at the next FEWT meeting.



FIRE EQUIPMENT WORKING TEAM

To: Working Team Members

Date: March 25, 2004

From: Tory Majors, Chair

Subject: April 20-23 FEWT Meeting, SDTDC

The following is the agenda for our upcoming meeting. The meeting will be held at the San Dimas Technology Development Center. Lodging information is enclosed.

The times are estimates but you should plan your travel accordingly. We will review the agenda first thing Tuesday morning and make any changes necessary.

Tuesday, April 20

8:00-5:00

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|--------------------|--|----------------|
| 8:00-8:15 | Introductions | All |
| 8:15-8:30 | Review Agenda | Tory |
| 8:30-11:00 | Web Page Redesign Presentation and discussion
(work in break) | Allen Deitz |
| 11:00-12:00 | PMS Review – what are we responsible for
(Handout 1) | Tory and Allen |
| 12:00-1:15 | Lunch | |
| 1:15-1:45 | NFES Update | Ralph |
| 1:45-2:45 | Proposal to establish standards for Aircraft
Rescue Fire Fighting Trucks
(Handout 2) | Tory |
| 2:45-5:00 | Quarter Turn Strategy Discussion and
Development of memos, etc. | All |

(work in Break) (Handouts 3&4)

Wednesday, April 21

8:00-5:00

8:00-9:00 Request for Potable Water Standards
(Handouts 5,6,7,8) Tory/All

9:00-11:30 **Joint Meeting with Federal
Laboratory Consortium** John Fehr

11:30-12:45 **Lunch**

12:45-2:45 Agency Updates
(15 minutes each) Agency Reps

2:45-3:00 **Break**

3:00-4:00 Ground Ignition Subcommittee-Charter Review
and discussion (memo to subcommittee attached) Robert

4:00-5:00 Updates from MTDC/SDTDC Ralph/George

Thursday, April 22

8:00-5:00

8:00-8:30 Review of October notes (attached) Tory/All
Survey Summary and distribution George
Charter Revision Tory
Membership Tory

8:30-9:00 Camel Back Products – discussion about use All

9:00-9:30 General Specification Discussion All

9:30-9:45 **Break**

9:45-10:45 Standardization – options for the future All

10:45-11:30 Next FEWT Meeting (NWCG presentation?) All
Meeting Wrap-up – Identify Action Items and
Responsible individual

11:30 Adjourn
Afternoon will be engine standards discussion within Forest Service but
all
are welcome to stay

11:30-12:45 Lunch

12:45-4:00 Engine Standards within the Forest Service-identify concerns, what is the standard if any in each region and discuss/develop a common standard that would be acceptable (if necessary) R1, R2, R4, R5, R6 (R3?)

Adjourn