



FIRE EQUIPMENT WORKING TEAM

To: Kirk Rowdabaugh, Chair NWCG

Date: October 6, 2005

From: Tory Henderson, Chair FEWT

Subject: FEWT 2005 Accomplishments

The FEWT projects were completed as planned during FY2005 and within the budget allocated from NWCG. Both the Missoula and San Dimas Technology and Development Centers have project status reports available on their web sites if additional information is desired.

If you have any questions, please contact me at 208-387-5348.

Sincerely,

/s/ Tory Henderson

Tory Henderson, Chair FEWT

Enclosure

NWCG ACCOMPLISHMENTS

FEWT Meetings Held

State Travel Budget: \$18,000

FEWT Meeting State Rep. Travel Spent = \$5,732.03

NFES Meeting Travel Spent: \$1,092.41

Task Group Travel Spent: \$1,615.68

Total State Travel Spent: \$8, 4401.12

FEWT Meeting - October 2004: Held in Ft. Worth Texas to allow for greater interaction with GSA. GSA hosted a tour for FEWT members to observe the operations at one of GSA's contractor's facility. This facility packages various items stocked by the national caches and employs all disabled workers.

FEWT Sponsorship and Participation at National Wildland Fire Equipment Conference - November 2004: FEWT members and advisors participate in the annual meeting.

Issues are presented and acted upon from this conference that effect equipment needs in the field. Both SDTDC and MTDC advisors to FEWT assist in this conference. Hold cache manager meeting and NFES committee meeting during this same time.

April 2005: Held Spring FEWT meeting in Maine in order to have eastern state presentation relative to equipment differences and the Compacts in place.

May 2005: Presented FEWT Program to the NWCG at their spring meeting.

Logistics Subcommittee - the NWCG requested a Logistics Subcommittee be established under FEWT. This was accomplished with an approved charter in place and interagency membership. The FEWT has tasked the subcommittee with two requests for assistance to date.

Ground Ignition Subcommittee - the FEWT established this subcommittee to deal with all the issues surrounding the subject. A charter was developed and approved by FEWT.

Engine Subcommittee - this subcommittee was tasked with issues surrounding the engine typing and other standards that need to be developed. The sub-committee will provide a progress report at the FEWT October 2005 meeting.

NWCG DOCUMENTS

Publication Updates = \$17,000

On-going review of all publications: Spark arrester guide complete and on-line. Will be updated annually or more frequently as new equipment is evaluated. All FEWT publications will be evaluated for on-line capability versus hardcopy.

SPECIFICATIONS, PUBLICATIONS, STANDARDS, PROJECTS, FIELD SUPPORT, TECHNOLOGY TRANSFER (MTDC and SDTDC)

Smokejumper Program - New materials for training smokejumper pilots are being developed through a collaborative effort with the Bureau of Land Management and will be completed in October. Parachute Malfunction Training materials are being developed. Identifying a new smokejumper helmet and facemask.

Ignition Systems Projects - Testing and evaluating the SEI sphere dispenser. Helitorch evaluation is underway. MTDC will perform a full operational evaluation to determine if these torches should be approved by the Interagency Aerial Ignition working group. ATV drip torch prototype testing completed this fiscal year. Drawings, specifications, and operator manual to be finished by December 2005. Fuel transport interagency policy has been developed and the guide is to be published through MTDC. Sphere dispenser for ATV's is being evaluated. Many safety concerns are coming to the surface. Plastic Sphere Dispenser emergency procedures are being developed. Plastic sphere hand launcher (Australian butane powered) was evaluated and determined to be too unreliable for field use. Preliminary evaluation of short-range spring-powered launcher developed by Field Support Services was conducted. Field testing to take place next.

ATV Helmet - Began field testing of two helmets that will offer impact protection as well as flame resistance while offering better visibility than current ATV helmet.

Helicopter Rappelling - Began Supplemental Type Certificate drawing modifications for Bell External Load Attachment Mechanism. Entered into agreements for the manufacture of Forest Service owned ASTAR rappel kits. Responded to requests from the National Rappel Equipment and Procedures Committee which included: manufacturing and distributing spotter sheaths; single rope snub straps; prototype harnesses for evaluation; purchased and distributed RQ3 letdown friction devices; developing a power point program to show correct method for replacing blades in Raptor safety knives; rappel guide edits are completed and waiting for approval and in the future MTDC will maintain the guide; and working to develop a better gunner belt design for the Rope

Assisted Deployment System (RADS).

Helimulching - drafted a safety bulletin for approval by the National Helicopter Specialist regarding the issue of high peak loads when using cargo nets to drop hay bales. Performed crane/cargo net drop tests using shredded wood by-products to determine potential feasibility.

Firefighter Protective Clothing - Changed the specification to address seam issues with fire pants, and adjusted the pattern to allow more room in the pants. Working with cloth manufacturers to find new cloth options for wildland fire pants. Developed and distributed a questionnaire for field input on fire pants and gloves. Tested effects of DEET and Permethrin insect repellants on flame resistance Nomex materials. Wrote and distributed a Tech Tip describing the results.

Fire Shelter Improvement - Developed a large fire shelter and a practice large fire shelter. Made several improvements to the fire shelter design, including better grip handles, stronger cloth, and stronger seams. Wrote a Fire Shelter Update for field distribution. Entered into contracts for the development of fire shelter test protocol and pass fail criteria and toxicity test protocol and pass fail criteria. Developed a retrofit fix that can be accomplished at field units for a problem with the fire shelter bag pull strap.

Chainsaw Chaps - Tested performance of chaps soiled with grease. Found that grease reduced performance so developing prototype chaps with barrier layer to prevent grease from reaching Kevlar liner.

Wildland Firefighter's Safety and Health - Issued Wildland Firefighter Health and Safety Report No. 9, focusing on micronutrients and the need for vitamin/mineral supplements for wildland firefighters. Continuing field studies on carbohydrate supplements and their effects on fatigue, work output and cognitive and immune functions. Reported results of field study on selected incident command positions for the IOSWT. Energy expenditure measurements were used to guide selection of appropriate work capacity test. Provided input to the SHWT EMSG concerning the need for vitamin and mineral supplements for wildland firefighters.

Entrapment Avoidance - Established methods for data collection, analyzed interview responses gathered during the second phase, and presented an update at the Human Factors Safety Summit in Missoula.

Biomass Reduction – Provided support, including video support, for the “Big Iron 2005” fire/fuels heavy equipment workshop and demo held in Montana.

Fire Sign Installation Guide – The Incident Sign Installation Guide was published and distributed to the field. This guide will assist personnel responsible for the placement of signs at or near incident management activities.

Quarter-Turn Test Program – SDTDC completed field testing of fire hose with integral quarter turn couplings. Field testing results will be presented at the October 2005 FEWT meeting. FEWT will be sending a letter to NWCG and Cooperators to re-introduce quarter turn technology.

NH vs. NPSH Threads – Worked with NFPA in a cooperative effort to continue to allow both types of threads as the wildland fire community uses NPSH threads versus structural fire community who utilize NH threads.

AIT Task Group – SDTDC participated in the NWCG ICBS-R project as subject matter experts.

Smart Card – Assisted the ISUITE project group with requirements and use for a supply unit module soon to be released.

Fuel and Oil Issue System – A system was developed and field tested during the 2005 fire season. The system utilizes 2D barcodes, portable bar code scanners, and portable printers. Potential to replace the paper form for fuel and oil issues at an incident.

Fireline Production Rate Equipment – Testing of various GPS receivers and monitors was completed. Equipment and procedures that can be used to accurately determine fireline production rates have been identified and a Tech Tip will be written describing this equipment and detailing the methods used.

Fireline Production Rate Determination – Some equipment was purchased in order to begin data collections. Initial testing and data collection will be collected on Hot Shot crews only due to logistics and funding limitations.

Selecting Appropriate Speed Rated Tires on Fire Equipment – A Tech Tip has been developed that provides the reader with how to read the manufacturer markings, where

to get more information, and reread information.

Coffee Kit Evaluation - A Tech Tip has been drafted that provides recommended changes to the existing coffee kit design in order to comply with ANSI Z21.8, American National Standard for Outdoor Cooking Appliance. The Tech Tip should be published in the near future.

Type III Wildland Engine Noise Study - The noise exposure wildland engine crews are subject to was studied. The two noise levels of interest are the threshold levels established by OSHA and the industry recognized levels for communication. The project also included the use of headsets. The project report has been completed and will be published in the near future.

Type III Wildland Engine (Model 62) Familiarization Video - A six disc training video was created on the Model 62 wildland fire engine. The video contains six hours of training footage. Nine hundred sets were made and distributed.

Ember Protection for Fresh Air Intake - A replacement air filter was identified for the fresh air intake on the Type III Wildland Fire Engine. This filter is available commercially and a Tech Tip will be published in the near future.

Type 2 Hose - Qualification testing was completed for Oklahoma League for the Blind for Type 2 hose. GSA now stocks this hose.

Standardized Sprinkler Kits - SDTDC developed a standard sprinkler kit for the National NFES caches to stock. The proposal was accepted by all caches.

Fish Strainer - The hose-end strainer evaluation is complete for the 1-1/2" size with all 130 produced being sent to the field. The 4" strainer was received by three units for evaluation; however feedback has not been received. GSA process has begun.

Helicopter Fish Strainer - Phase 1 is dealing with still bodies of water. A ¼ scale prototype was developed and tested to validate the design. The full scale fish strainer prototype has been developed and initial testing performed. The full scale prototype includes a deployment and retrieval system. Phase 2 is dealing with moving water and began in FY05 and will continue into FY06.

Foam Proportioners - Four foam proportioner units were evaluated and the draft report is complete.

SEAT Blending System - The Tech Tip on the two blending systems (single pump and two pump configuration) has been completed and is available for distribution.