

**NWCG Equipment Technology Committee Meeting**  
**December 8-9, 2020**  
**Virtual**

ETC Member Attendees:

Tim Blake – NWCG Coordinator

Monty Bollock –NASF Western State Representative (SD Dept of Ag)

LJ Brown – BLM-NIFC

Matthew Cnudde – NFES Subcommittee Chair (USFS NIFC)

Ralph Gonzales – NTDP Liaison to ETC (USFS-NTDP)

David Haston – ETC Chair (USFS-NIFC)

David Stockoski – Michigan DNR (Roscommon Equipment Center)

Michael Womack – NASF Eastern State Representative (Virginia DOF)

Bill Yohn – ETC Vice Chair, Mobile Equipment Subcommittee Chair (NPS-NIFC)

Shirley Zylstra – Fire Chemicals Subcommittee Chair (USFS-NTDP)

ETC Member Attendees Day 2 only:

Eric Fransted – Fire Shelter and PPE Subcommittee Chair (FWS-NIFC)

Kim Mccutchan – Radio Standards and Use Subcommittee (USFS-NIFC) report-out only

Jay Tarley – NIOSH liaison (PPE study report-out only)

Guests:

Joey Chong – Notetaker (USFS)

Robert Manwaring – USFS-NTDP

Tony Petrilli – USFS-NTDP

Sam Wu – USFS-NTDP

Anthony Burrows – USFS-NTDP

John Kovalicky – USFS-NTDP

Roshelle Pederson – Data Management Committee Chair (DOI-OWF)

Ted Mason – BLM-NIFC

Steve Counts – Virginia DOF

Crystal Forester – NIOSH

**Tue AM Session**

NWCG Update – Tim Blake

- PMS 210 is being discontinued (PMS 210 replaced the Fireline Handbook). Study reveals that it contains lots of duplication with other documents and shows minimal use. Find relevant content and move into other documents
- NWCG focusing on virtual delivery of classes now. 30,000 people have registered into NWCG portal.
- Migration of information from NIFC.gov to NWCG website

- NWCG All-Chairs annual meeting typically occurs in Feb. Going to do it via an expanded Connections Meeting rather than 3-day in-person meeting.
- NWCG Executive Monthly Meeting is open to ETC members as we see fit.
- Tim is our advocate and can get us connected for website and publications work.

Website, roster review and action item review – Bill Yohn

- Equipment Technology Committee website was reviewed
- Logistics subcommittee moved to Incident and Position Standards Committee
- Action item review and updated (Bill to update spreadsheet)
- New Action Items:
  - Outreach for Invasive Species Subcommittee chair (D. Haston)
  - Tractor Plow typing and associated glossary terms (B. Yohn)
  - Request that all subcommittees review their rosters, assigned publications and glossary terms
  - NTDP to draft lug nut equipment bulletin (R. Gonzales)
  - NFES task Incident Operations Subcommittee to provide standard hose recommendation for national cache system (M. Cnudde)
  - Provide ETC with spreadsheet of glossary terms (R. Pederson, Data Management Committee)

Review of Equipment Bulletins, Cache Memos and NMAC memos – Matt Cnudde

- The National Incident Support Cache System acted early to address possible COVID-19 response by adding additional warehouse space, and inventory for potential issues with feeding and decontamination at the incident. MRE's were procured as well as specialized PPE such as face masks, face coverings, gloves and other disinfecting items. The NISC was a regular participant with the Medical and Public Health Advisory Team (MPHAT) to validate disinfecting and PPE requirements.
- Three cache-related NMAC memos regarding PPE and pandemic support items (2020-007, 2020-013 and 2020-031)
- Updated the online NFES catalog for COVID-19 mitigation support
- Latest Cache Memos:
  - 20-01: First Aid Kit, Utility (NFES 0067)
  - 20-02: 6000 Lb. Cargo Net (NFES 0458)
  - 20-03: N95 Respirators in NFES 1660 and 1675 Disease Barrier Kits
  - 20-04: Counterfeit Respirators

National T&D program - Ralph Gonzales

FAM Portfolio has 44 ongoing projects

- Completed eight projects this year such as:
  - Long-handled Pulaski
  - National Vehicle Issue Reporting
  - Wildland Helmet Review
- New projects

- WFCS-Modified Burn Test
- Fire Resistant Air Filters (Vehicle)
- Flight Helmets
- Alternative Power for IC such as solar
- Lithium Battery Study
- FAM Food Project
- Boots Requirements
- COVID Response Projects
  - Feeding options: Caterer mitigations, First Strike Rations, Shelf-stable Food Boxes
  - Vehicle Cleaning Guidelines
  - Practice fire shelter cleaning
- Fuel Geysering training and awareness
  - Most crews find the SOTER Fueling System favorable.
  - AgLearn Basic Fuel Handling which allows for tracking.
  - 11 incidents, 2 injuries in 2020. Similar to 2019, despite higher fire activity in 2020.
  - Fuel container testing by Vexa Group.
- Specifications & Standards
  - Current projects: women's fire pants and shallow water fish strainers.
- Fire Vehicles
  - Multi-Mission Crew Vehicle
  - Fire Vehicle Reporting database
  - Fire Vehicle Roll-Over Protection
- Ignition Projects
  - PSD Accuracy
  - Fire Simulator
  - Ignition Potential on cause and origin

Roscommon Equipment Center (REC) - Dave Stockoski

- REC started in 1929. Cooperative between NASF and Michigan DNR
- Historical projects
  - Backpack-style Flamethrower
  - Tilt-Bed Transport Unit
  - Ride-on Fireplow
  - Fireline Plow
- Completed projects
  - Campfire Embers Game – show at fairs, events
  - M915 Freightliner conversion to straight-bed to haul crawler tractors (dozers)
- Ongoing projects
  - Develop prototype M916 Wildland Engine
  - Big Cypress Preserve Swamp Buggy
  - Assess suitability of FMTV (Family of Medium Tactical Vehicles) as Water Tenders or Wildland Engines

- Amber Lighting Trial to improve visibility in smoky conditions. Can accompany air trials with green lights for aerial visibility.
- REC Virtual workshop will be held Jan 13<sup>th</sup>, 2021

## **Tue PM Session**

Innovation Process Updates – Ralph Gonzales

- Formal form for proposals from public for review.
- Create standard process and timeline for evaluation.
- Come up with routing and follow-up procedures.
- Determine if previous ideas and archives should be posted online.

## **Miscellaneous topics**

Lug Nut RLS/Equipment Bulletin – Dave Haston

- Lessons Learned Center requested an equipment bulletin to address lug nut issues.
- LJ will provide past BLM equipment bulletins related to lug nuts
- Request for NTDP to draft the ETC equipment bulletin – R. Gonzales

Standard Fire Hose for Cache System – Dave Haston

- Would like to standardize on one hose in the cache system for efficiency. The two national caches in CA carry type 2 (yellow hose exclusively) while the other 13 caches (supporting balance of the states) carry type 1 (white hose).
- Sam Wu can provide technical info and specs.
- NFES Subcommittee to send tasking to the Incident Operations Subcommittee seeking input on standard fire hose for the national cache system – M. Cnudde

## **Agency Updates**

Bureau of Land Management – LJ Brown

- National Fire Equipment Program (NFEP) added 2 fire equipment specialists to their program, Justin Lammers and Jade Martin. NFEP is now handling contracting and inspection for NPS and BIA.
- NFEP delivered 78 engines and command vehicles in 2020. They intend to inspect and deliver 201 in 2021.
- Two Equipment Bulletin issued have been issued in the last year. One was issued in July 2020 for loose clamps on the hoses for the power steering system on International Trucks with the B6.7 motor. The other was also issued in July 2020 for loose hardware securing wire connectors on the Common Ground Stud and Common Power Distribution Stud causing grounding and power issues in Class 667 Heavy Engines (Type 3/4) built at Pierce Manufacturing delivered in 2019.
- Rural Fire Readiness/equipment transferred 21 engines and command vehicles in FY20, with an additional 27 engines planned for FY21. Additionally, significant amounts of

water handling equipment, hand tools, and radios were transferred to local fire departments

- NFEP anticipates accepting 47 Freightliner extended/crew cab Type 3/4 engines, which will have the Cab Safety System: side air bags, seatbelt pre-tensioning, and RollTek seats
- Experiencing challenges with implementing Tier 4 EPA pump motor on Type 3 and 4 Wildland Engines.
- BLM Fire Equipment Group purchased and issued 3643 Individual Firefighter First Aid Kits to all BLM fire programs.
- The final 58 Location Based Services (LBS) terminals have been purchased and will allow for the completion of terminal installs on all BLM fire series equipment. LBS data was successfully fed into EGP. This allows all EGP users the ability to view BLM equipment location data with all other geospatial data available in EGP. EGP is serving as a common operating picture (COP) as location data is viewable by interagency partners.

National Park Service – Bill Yohn

- Transitioned additional command vehicles to working capital fund.
- Command vehicle upfitting contract update: Chassis ordered in GSA AutoChoice go direct to Auto Truck for betterment from chassis manufacture and then delivered to dealer rather than having to be picked-up from the upfitter.

US Forest Service – Dave Haston

- FS formed a heavy equipment committee to develop equipment standards, training etc.
- Multi-mission crew vehicle will be an alternative to conventional crew carriers. The new vehicle is based on a 19,500 lb. GVWR crew cab with a custom body. Many other uses anticipated (helitack, Wildland Fire Modules, fuels, type 2 crews, etc.)
- Rollover protection system built on four new heavy engines.
- Low cost type 6 engine being considered (modern version of Model 52).
- FS has standardized on Type 3 and Type 6 platforms. Heavy type 3 will replace the conventional Type 4. Will include 750 gallons, PTO pump, 2 hose reels and a spare tire.
- Challenges with new vehicle inspections (travel restrictions – COVID-19)
- Evaluating new HME-produced vehicles at SDTDC

NASF Eastern States and Virginia DOF – Mike Womack

- Central Virginia 66 inches of rain, 27 in above normal
- Virginia shaping up to be slowest fire season on record
- Virginia DOF IMT COVID-19 response incident assisting the State EOC. Longest Virginia IMT activation on record of 139 days
- 2020 – 30 named storms, 18 became hurricanes
- Plum Explorer – portable cell phone amplifier unit tested by SA Blue IMT on August Complex, works on AT&T and Verizon, Successfully used to bring morning briefing to spike camp via Microsoft teams, access email, Avenza maps etc.

**Wed AM Session**

ETC honored outgoing NASF Eastern States representative Steve Counts who served on ETC/FEWT for 20 years (2000-2020). Steve is retiring from Virginia DOF at the end of the year.

**Glossary Review** - Roshelle Pederson (Chair, Data Management Committee)

- In process of revising the NWCG Glossary to allowing linking of term to a policy when needed.
- After revision of term, there is a 30 day timeframe for comment.
- Roshelle will provide a spreadsheet of ETC glossary terms
- Subcommittees will need to review their terms and provide recommendations.

Subcommittee Updates

NFES Subcommittee Update – Matt Cnudde

- Historic fire season: 8,000 mi of hose, 650,000 MRE's, 12M AA batteries
- The NISC had three COVID-related incidents that required a temporary shutdown, fortunately these were short lived and resulted in little to no disruption in service
- We should see new items sometime in the 2021 season to include the long-handled Pulaski and hopefully the new chaps and fish screens for pumps
- The AAR and CROP discussions with DLA were accomplished
- Development of a plan to perform an update to the fire shelter will be a significant project for this season. ETC bulletin, Cache Memo have been drafted as part of communication plan
- Minor kit changes expected for this year

Invasive Species Sub Committee – Matt Cnudde

- The training video was completed this Spring and is posted on the ISSC website. RT-130 Module: [Aquatic Invasive Species Mitigation for Ground Resources](#)
- The subcommittee needs both a chair and co-chair.

Mobile Equipment Subcommittee Update – Bill Yohn

- Would like to add representatives from FWS, and Cal Fire to roster. Elden Alexander was added as a primary member from BLM.
- Thinking about updating the Water Handling Equipment Guide in a year or two.
- New Dozer Typing Standard was published and now has 4 dozer types (PMS 200)
- Tractor Plows/Dozer Plows Typing Standard matches the Dozer Typing Standard however glossary terms need to be finalized before it can be posted to PMS 200 website.
- The updated glossary definitions for tractor plow/dozer plow typing will provide the review process rather than an Equipment Bulletin
- Will also follow-up with updates to NWCG Data Standard for Fire Resource Kind, Category & Type (PMS 910)

#### Fire Chemical Subcommittee Update – Shirley Zylstra

- A subcommittee meeting is planned for Spring 2021.
- New retardant Fortress FR-100, MgCl-based, interim qualification achieved.
- Perimeter Solutions LC-95A will eventually be replaced by LCE20.
- Updated Class A Foam Specification with new pass/fail requirements such as corrosion, foaming, and wetting.
- The lab is anticipating 15-18 new product submissions in FY21.
- New retardant pre-treatment category may find use by railroad, power companies, etc.

#### Fire Shelter and PPE Subcommittee Update – Eric Fransted

- Procedure posted for disinfecting practice fire shelters
- Working on revising fire shelter training 2021 update and the training booklet.
- Minor design changes by adding slits into the PVC bag for more reliable opening. Heat from burnover effecting the bag. Production in 2021 reflects new design. Fire shelters on hand (in DLA, national caches and in the field) will need retrofit. Instructions coming soon. Implementation plan needed.
- Five fires (4 in California and 1 in Montana) 30 fire shelters with 35 people deployed this season. Fire shelters continue to save lives.
- NTDP helmet project is ongoing
- Sawyer Boots project. And may follow-up on wildland firefighter boot specs.
- Women’s Fire Pants. Two prototypes developed. 120 pairs were field tested.
- New NFPA 1984 respirator standard. Tiered standards (3)

#### Ground Ignition Subcommittee Update – Mike Womack

- Assisting USFS Region 8 with evaluating UTV aluminum torches.
- Flamethrowers were tested in field. Manufacturer did not produce with commercial/prescribed fire use in mind. Sent feedback to manufacturer and received limited response.
- Updated online USFS Hazardous Material Transport training coming soon.
- Large format flare launcher being tested. Has same range as pistol flare, but with more heat.

#### Radio Standards and Use Subcommittee - Kim Mccutchan

- Lot of testing on personnel tracking
- Sending GPS tracking info through radio was tested.

### NFPA Committee Updates

#### Fire Apparatus – Bill Yohn

- Transition of two NFPA documents (1901 – Standard for Automotive Fire Apparatus and 1906 – Standard for Wildland Fire Apparatus) into a single 1900 document called

Standard for Aircraft Rescue and Firefighting Vehicles, Automotive Fire Apparatus, Wildland Fire Apparatus, and Automotive Ambulances. Lots of work to combine.

- Public input just closed on 1900.
- lighting intensity and pattern requirements may change in next revision

Electronics – Matt Cnudde

- NFPA 1801 standard on thermal imagers came out
- Working on a standardized radio but will have many features for structural fire that wildland doesn't need. AA batteries in clamshells will not likely meet power requirements.

Protective Clothing and Equipment – Tony Petrilli

- New edition of NFPA 1977 will contain fire shelter requirements
- 1877 – Standard on Selection, Care, and Maintenance of Wildland Fire Fighting Clothing and Equipment
- Working with NIOSH on clothing contaminant testing and cleaning

### Additional Miscellaneous Topics:

NIOSH Clothing Study – Jay Tarley and Crystal Forester– CDC/NIOSH

- Determine contaminants on clothing to positively identify and determine source.
- Commercial extractors vs household washing machine.
- Completed washing machine at 4 different temps and data is getting analyzed. Coming soon.
- Would like to get a more comprehensive study with more dirty shirts up until April/May 2021. People who submit shirt for study will get replacement with new shirt. Looking at semi-volatiles.

Proposed NWCG alert system – Eric Fransted

- Trying to standardize alert/bulletin system, document format and color system (borders).
- Complex since other committees (e.g. NIAC) have different color systems

**Next meeting** Mar 30-31, 2021 (Virtual – Teams)