APPENDICES D-Z *OPTIONAL – Change to BLACK*

Appendix D

Daily Operations

ECC Operations

0900 hrs.	Review WIMS for forecasted indices, review Notification Matrix for possible notifications to users.
1000 hrs.	Broadcast Weather Forecast and Last Night's Predicted Indices with Morning Report over AEU Local Net
1030 hrs.	First Dispatch Level Calculation (Use latest observation*)
1230 hrs.	Second Dispatch Level Calculation
1330 hrs.	Edit the 1200 Observation in WIMS for all stations in AEU and make third Dispatch Level Calculation.
1530 hrs.	Fourth Dispatch Level Calculation (1400 Observation)
1600 hrs.	Tomorrow's Predicted Indices Should be Available in WIMS. Review thresholds and Notification Matrix. Begin Notifications for tomorrows predicted Adjective Ratings.
Sundown + 2 Hours	Last Dispatch Level Calculation (Reset for Tomorrow)

*** If the observation has not arrive in WIMS than use the latest available observation. Data transmission times for AEU RAWS are all after the 58th minute of the hour. Therefore the 1200 hr. observation is actually transmitted to the satellite at 1258 hrs. This makes 1200 hr. observation the closest observation to the 1300 hour, which is the target time for NFDRS. Always remember the observation time is rounded DOWN to the whole hour.**

Daily Dispatch Level and Adjective Rating Data Sheet

Date:_____

Forecasted Indices and Adjective Ratings (WIMS forecast from yesterday, read with morning weather)

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

1200 Hr. Observation From WIMS

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

Afternoon Supplemental Calculations

WIMS Ob Time:

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

Supplemental Dispatch Level and Adjective Rating Data Sheet

Date:_____

WIMS Ob Time:

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

WIMS Ob Time:

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

WIMS Ob Time:

NFDRA Dispatch Zone	Temp	RH	Wind Sp/Dr	IC	SC	BI	Adjective Rating	Dispatch Level
EAST **Pilot Hill** **RAWS 042609**								
WEST **Ben Bolt** **RAWS 042612**								

Appendix E

WIMS State of the Weather and Wet Flag Definitions

State of the Weather Codes for WIMS

Code	Associated State of Weather
0	Clear (less than 1/10 of the sky cloud covered.)
1	Scattered clouds (1/10 to 5/10 of sky cloud covered).
2	Broken clouds (6/10 to 9/10 of sky cloud covered).
3	Overcast (more that 9/10 of sky cloud covered).
4	Foggy
5	Drizzling (precipitation of numerous fine droplets, misting).
6	Raining
7	Snowing or sleeting
8	Showering (in sight of or occurring at station).
9	Thunderstorms in progress (lightning seen or thunder heard within 30 miles of observation site).

State of the Weather Codes 5, 6, & 7 Set Wet Flag to YES

State of the Weather Selection in WIMS

This section has been created to demystify the issue of State of the Weather selection in the WIMS system and the other issues that have to be considered as one selects one of the 10 State of the Weather codes. State of the Weather code selection is important for two reasons: to evaluate the effect of cloud cover on fire fuels and the level to which fuels have been wetted by precipitation. State of the Weather selection will assign the appropriate values in the NFDRS calculations to model the impact of cloud cover and associated moisture on fire fuels. State of the Weather is the condition that exists over the RAWS itself. This can vary between RAWS due to differing weather conditions over the Unit.

State of the Weather will have to be selected for each station each time a selected observation is to be utilized by the NFDRS calculations. This will be the normal afternoon “O” observation as well as the interval observations “S” that will be necessary to calculate the Adjective Ratings and the scheduled NFDRS indices, as well as dispatch levels. The selected State of the Weather code can cause wild swings in NFDRS indices if the incorrect code is selected. This is especially true with Codes 5, 6, & 7.
State of the Weather Codes 5, 6, & 7 will cause the Wet Flag setting to switch to “Yes” (the Wet Flag setting can be found at the far right side of the WIMS page where observations are edited). The Wet Flag setting of “Yes” or “No” refers to whether the fuels are so saturated with precipitation moisture to the level that a handful of the fuels will produce noticeable quantities of water when squeezed or swung. That’s a lot of moisture. This is important because most NFDRS indices will automatically get driven to 0 when the Wet Flag is tripped to “Yes”. During the winter months this isn’t much of a problem, but during Fire Season this is a major problem because we are trying to model the NFDRS indices to accurately reflect fire danger. Driving the indices to zero during the Fire Season will cause wild swings within index values for the remainder of the fire season. Furthermore, it’s almost impossible to accumulate enough rainfall during the fire season to cause wild swings in the actual fire danger and risk of ignition

is only slightly reduced for a short period. Thunderstorm precipitation isn't adequate to change the overall fire danger picture. Minor day to day variations are normal however wild swings back and forth are not. Only what is described as a "Season Ending Event" would cause this.

So, between May 1st and the first MAJOR fall rains, don't use State of the Weather Codes 5, 6, & 7. Use one of the other codes that will reflect rainfall without tripping the Wet Flag to "Yes". The Unit Fire Weather Coordinator will make the determination when the season ends within the NFDRS models in WIMS.

One additional issue with respect to the Wet Flag needs to be clarified for the Zion RAWS. The issue revolves around the treatment of snow over fuels. As long as there is snow on the fuels the Wet Flag must be tripped manually. For example, the sun is shining bright however the fuels are covered in two inches of snow. The State of the Weather Code will be a 0 or 1, however the Wet Flag will need to be manually tripped to Yes to ensure the models know the fuels are covered in snow. This may sound trivial, however in late fall when early snows can be followed by dry spells, the unit needs to accurately model the fuels that are impacted by persistent snow.

In Summary:

1. State of the Weather is entered in WIMS to model the affect of cloud cover and precipitation over fire fuels.

2. State of the Weather must be entered for all observations used in NFDRS.

3. State of the Weather Codes 5, 6, & 7 are not to be used after May 1st.

4. Manually trip the Wet Flag to Yes if the fuels are covered in snow, if it does not trip automatically (5, 6, & 7).

5. State of the Weather represents conditions over or near the RAWS as described above in the Codes Description. Not over or near the ECC.

6. The Unit Fire Weather Coordinator will determine when the Fire Season ends in the WIMS NFDRS models. This relates to the use of the 5, 6, & 7 State of the Weather Codes.

Appendix F

Amador-El Dorado-Sacramento-Alpine Unit 2012 Lightning and Complex Incident Plan

Background

The Amador El Dorado Unit Lightning, and Complex Incident Plan, has been created to guide Unit operations, and support personnel, during lightening, and other complex incidents. Lightning events are an example of an incident that can become especially overwhelming for the Unit and the Emergency Command Center (ECC). Lightening complexes can tax the daily ECC operations as the complexity of the event increases. The intent of this plan is to establish, and maintain, a seamless flow of resource dispatching, ordering and accountability. Preparation of this plan was originally prepared with the intent of managing lightning incidents; however it is recognized that it can be activated for any incident that presents similar demands on the Unit and ECC. This plan is designed as an outgrowth of the Incident Command System (ICS) using the standard organizational elements to cover geographic areas that are impacted by lightning or any other emergency incident that exceeds the operational control of the Unit ECC.

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Activation of the Plan

Phase I – Prediction and Planning

Phase II – Modified Response Plan

Phase III – ICA and Area Command Activation

- Area Definition and Reporting Responsibility
- Naming Convention
- Detection
- Dispatch
- Escaped Fires
- Deactivation

Attachment I – Lightning Activity Level descriptions

Activation of the Complex Incident Plan

The AEU Complex Incident Plan consists of three phases. The complexity of the predicted or actual situation dictates when each successive phase is implemented. Phases are not intended as hard fast rules of operation, but as guidelines for a smooth and orderly transition into an expanding organization required by increased incident work load. In addition, this Complex Incident plan also allows for a smooth transition out of a complex incident organization back to the local control of normal operations.

One of the keys to implementation of the phases in this Complex Incident plan is to start using the planning cycle throughout each operational period. This would include morning and evening briefings and/or conference calls, cooperators notifications, planning meetings to validate objectives and an incident action plan for the following operational period.

Phase I – PREDICTION and PLANNING

Parameters for Establishing Phase I of the Complex Incident Plan are as follows:

- A predicted LAL of 3 or higher by the NWS Sacramento (Fire Weather Forecast, Fire Weather watch or warning)

- Information gathered by Unit personnel of thunder cells moving towards the Unit. Example: monitoring other Unit or Forest frequencies, Command Nets, and the State Intercom. Patterns detected on the BLM Lightning Page indicating approaching cells to AEU SRA

- Prediction of an event that can cause a large number of incidents requiring a modification of the dispatch level to maintain sufficient available resources. (Winter wind event, heavy snow or freeze, possible flooding etc.)

Actions

- Positive Notification to Unit Duty Chief; page all Chief Officers and Cooperators. Initiate Planning Cycle

- Chief Officer conference call.

- Contact affected cooperators and agencies to obtain a briefing on their situation, needs and resources. (PG&E, SPI, County Public Works, OES etc.) Based on the information provided consider advising them to establish a mission number for CAL FIRE resources.

- Initiate authorization of staffing pattern. Consider planning for, or ordering the following resources:

  - ✓ Staff lookouts as needed
  - ✓ Open Expanded ECC and/or staff as needed in ECC
  - ✓ Staff support positions (RESL, SITL, PIO, PSC, LSC, GISS, FSC)
  - ✓ Staff additional operational positions (DIVS, BC's)
  - ✓ Staff additional Fire Prevention Positions

  - ✓ Hire local government equipment into State Fire Stations (WT's / Type III Engines)
  - ✓ Regional requests for resources based on unit drawdown
  - ✓ Coordination with ENF as to aircraft availability and predicted commitment of those aircraft.
  - ✓ Initiate AEU aircraft plan including ATGS platform and CWN helicopter
  - ✓ Coordinate aircraft implementation with neighboring state AAB's

- The Unit Duty Chief, ECC Chief, and Duty Field Battalion Chiefs will evaluate the situation throughout the operational period and evaluate the forecast. This evaluation will determine moving into Phase II.

Phase II – MODIFIED RESPONSE PLAN

Parameters for establishing Phase II of the Complex Incident Plan are as follows:

- Visual observation of active cells or down strikes on CAL FIRE Direct Protection Areas or adjacent DPA's and a forecast for activity to move onto CAL FIRE DPA shortly

- The ECC receives reports of event related incidents.

Actions

- The ECC will notify the Unit and all local cooperators that the Unit Complex Incident Plan is in effect at Phase II.

- Modify the IA Dispatch from full response to a level that considers incident complexity. Recommended dispatch a lightning incident would be:

  - ✓ *1 CAL FIRE Overhead*
  - ✓ *2 CAL FIRE Engines*
  - ✓ *1 Hand Crew or Dozer*
  - ✓ *1 Local government AHJ engine*

- The Unit Duty Chief, ECC Chief, and Duty Field Battalion Chiefs will evaluate the situation status, forecast and impact to the operational organization. This evaluation will be largely based on call volume and fire numbers and will determine moving into Phase III.

- ECC Chief should consider moving to a separate command frequency to manage command operations. Initial dispatches will take place on AEU local net.

Phase III – ICA and AREA COMMAND ACTIVATION

Parameters for establishing Phase III of the Complex Incident Plan are as follows:

- Phase III will go into effect when incident volume and continued forecasted activity has the potential to or is overextending the ECC capabilities.

The decision to activate an ICA will be made by the Unit Duty Chief, ECC Chief, Unit Duty Officer and affected Field Battalion Chief(s).

Actions

- Area Command will be formed at Camino Expanded ECC and will include:
- Area Commander (Unit Duty Chief)
- Plans Chief
- Logistics Chief

- Finance Chief
- PIO
- Liaison to Local Government Cooperators

- Consider requesting an agency representative from cooperators that have involvement Unit wide. For example SPI during a winter wind event.

- Area Command Positions will function at a unit level to support the management and control objectives of Area Command and ensure resources, support, and information is coordinated through the Area Commander.

- Individual ICA's (Incident Coordination Areas) will be formed by the responsible Battalion Chief using the parameters described below:

ICA Definition and Reporting Responsibility

- The Area Command and the ICA IC will develop specific geographical boundaries for any area of the Unit impacted by lightning, referred to as an Incident Coordination Area (ICA).

- A transition time will be established and agreed on by the Area Command and the ICA IC to take over dispatching of event related incidents for the area.

- Each ICA will have a geographic name and the ICA ICP will be determined by the IC. The IC for each ICA will report to the Area Command. Each IC will establish an appropriate ICS organization for the ICA.

- IC's are responsible to provide all command functions within their respective ICA's. Recommended organizational staffing is:
    - ✓ Incident Commander
    - ✓ Incident Dispatcher
    - ✓ Resource Status
    - ✓ Situation Status
    - ✓ Logistics
    - ✓ Field PIO
    - ✓ Division Group Supervisors or Branch Directors

Naming convention

- The IC will be responsible for naming incidents within the ICA and will work with the ECC to ensure that individual incident numbers are assigned. The IC will determine who will be responsible for the fire report and report all information to the ECC

- Each fire will be given a geographic name. Each fire will be tracked using GPS coordinates and established on a mapping system to be tracked at the ICA and relayed to the Area Command and ECC prior to each operational briefing.

- Each ICA is responsible for submitting 209 information to the Area Commander and ECC Chief by 0600 and 1800 each day.

Detection

- Lookouts will report all smokes to the ECC or the ICA upon direction from Area Command.

- Reconnaissance flights will be coordinated by Area Command. All flights associated with an ICA will be tracked on AFF by the ECC.

- Reconnaissance flights will report new smokes to the ECC, unless directed by the Area Command to report directly to the ICA's

Dispatching of ICA Incidents

- New incidents that are reported to the ECC will be relayed to the appropriate ICA IC or communications. The ICA IC will assign resources as appropriate.

- The ICA IC will be responsible for informing the ECC of any new incidents that are discovered within the ICA and will assign resources as appropriate.

- The ICA IC will make requests to the ECC for additional resources and maintain a sufficient number of resources in reserve for new incidents.

- The ECC will retain all dispatching responsibilities for non event related incidents and for all incidents in areas of the Unit not designated as an ICA. The ECC may request resources from an ICA to assist with non event related incidents.

Extended Attack Fires

- If a fire grows into the extended attack phase and exceeds the capability of the ICA resources, the ICA IC will request the Area Command take the incident back over

- A transition will take place once the Area Command has a command organization in place.

Deactivation

- The deactivation of an ICA will be a joint decision by the Area Command and the ICA IC (s). The following should be used as guidelines:

  - ✓ Most fires should be contained and in patrol status
  - ✓ Sufficient IA resources will be available to the ECC
  - ✓ All information pertaining to incidents in the mop-up or patrol stage will be given to the ECC
  - ✓ Activity in adjoining ICA's and Unit activity will be taken into consideration
  - ✓ Employee responsible for CAIRS, LE-66 and Preliminary reports will be reconciled

Attachment I

Lightning Activity Levels

LAL 1:

No thunderstorms.

LAL 2:

Isolated thunderstorms. Light rain will occasionally reach the ground. Lightning very infrequent, 1-5 cloud to ground strikes in a 5 minute period.

LAL 3:

Widely scattered thunderstorms. Light to moderate rain will reach the ground. Lightning is infrequent, 6-10 cloud to ground strikes in a 5 minute period.

LAL 4:

Scattered thunderstorms. Moderate rain is commonly produced. Lightning is frequent, 11-15 cloud to ground strikes in a 5 minute period.

LAL 5:

Numerous thunderstorms. Rainfall is moderate to heavy. Lightning is frequent and intense, greater than 15 cloud to ground strikes in a 5 minute period.

LAL 6:

Same as LAL 3 except thunderstorms are dry (no rain reaches the ground). This type of lightning has the potential for extreme fire activity and is normally highlighted in fire weather forecasts with a Red Flag Warning.