

# **Burn Unit 208**

## **Escaped Prescribed Burn Review**

### **Apalachicola National Forest**

#### **NARRATIVE-Review Questions**

The Burn Unit 208 Rx was completed on the Wakulla Ranger District of the Apalachicola National Forest on January 28, 2012. It escaped containment and was declared the Grand Bay Fire on February 12, 2012.

#### **1. An analysis of seasonal severity, weather events, and on-site conditions leading up to the wildfire declaration.**

The Burn Unit 208 prescribed burn (1802 acres) occurred on 01/28/12. The Apalachicola, as most of the Southeast, had experienced a dry 2011 and long term projections were for the La Nina conditions, which brings Florida above normal temperatures and below normal precipitation, to continue until March. The panhandle of Florida had been receiving more rain than the rest of the State, catching some frontal rains out of the Gulf of Mexico before the rains were pushed north into Alabama and Georgia. The Burn Unit 208 area had received 0.37 inches of rain on January 26<sup>th</sup>, and had received a total of 1.42 inches of rain in the 10 days prior to the prescribed burn and the Keetch- Byram Drought Index (KBDI) on the Apalachicola National Forest was 358. Unit 208 has a slash and longleaf overstory with some pondpine and oaks. The understory is mainly palmetto, gallberry and wiregrass with some brush oaks, wax myrtle, vines and titi. Fuel models are 2 and 7 with a 5 year rough.

In the 15 days following the implementation of the prescribed burn the Forest received only trace amounts of rain. The KBDI rose from 358 to 416. The Burning Index (BI) and Energy Release Component (ERC) which had been tracking around normal ranges both rose into the 97<sup>th</sup> percentile. The day of the wildfire declaration a red flag warning was in effect for long durations of relative humidity below 25 combined with high ERC values.

#### **2. An analysis of the actions taken leading up to the wildfire declaration for consistency with the Prescribed Fire Plan.**

The original prescribed burn was ignited on 1/28/12. All environmental parameters were in prescription with the exception of relative humidity. RH was predicted to be 28% and a variance from the Forest FMO was received. Documentation is available with the burn plan. Follow up documentation showed that burn was checked every day following ignition both by air and ground. Weather forecasts and documentation were attached for every day from day of ignition to day

of declaration. On 2/12/12 a fire was reported in the vicinity of Burn Unit 208. Crews arrived and began containment operations. District Ranger Marcus Beard arrived at approximately 1530 to discuss alternatives for containment. Thought process for selection of alternative centered on smoke issues and long term impacts of smoke on Hwy 267 and Hwy 20 if 6300 acres were committed to burn out, much of which contained swamp. Decision was made to construct line through swamp in BU 212. Crews were unsure of this line's capability of holding as relative humidity was in the teens (actual at 1530 was 15%). The decision was made to conduct a burn out to secure this line on the following day (2/13) due to more favorable winds and higher predicted relative humidity. Consequences of the larger burn out were 6 miles of Hwy 267 that would have to be patrolled for smoke, and the proximity of the burn area to Lake Talquin and the Ochlockonee River which would likely funnel smoke into additional smoke sensitive areas for a prolonged time. Burn was declared a wildfire at 1800.

### **3. An analysis of the Prescribed Fire Plan for consistency with policy.**

The review of the Prescribed Fire Plan found a well prepared Prescribed Fire Plan along with good documentation. All required signatures and State permits were obtained. A Behave run and smoke analysis were completed. The plan was consistent with policy. Follow up documentation showed that burn was checked every day following ignition both by air and ground. Weather forecasts and documentation were attached for every day from day of ignition to day of declaration.

### **4. An analysis of the prescribed fire prescription and associated environmental parameters.**

Predicted weather and fuels were within prescription parameters on the day of the burn with the exception of humidity which was predicted to be 28%. A variance was received from the Forest FMO. Weather taken on site the day of the burn showed the lowest relative humidity of 36% taken at 1400. All parameters stayed well within prescription the day of the burn.

Beginning February 8<sup>th</sup> parameters began to fall outside the prescribed prescription. On February 8<sup>th</sup> KBDI reached 402 with more than 12 days since .25 inches of rain. On 2/9 the KBDI was 407, and the low RH was predicted to be 27%. On 2/10 KBDI was 412, the low RH was predicted at 28% and the ERC was predicted to reach 66. On 2/11 KBDI was 414, low RH was predicted to be 27%, ERC was predicted to reach 61 and winds were predicted to gust to 28mph. The day of the wildfire declaration the KBDI was 416, low RH was predicted to be 13% and ERC values were predicted at 70.

### **5. A review of the approving line officer's qualifications, experience, and involvement.**

The District Ranger is qualified to sign prescribed burn plans and signed the Agency Administrator Go/No-Go checklist on 1/28/12 with an expiration date of 3/1/12. Documentation in the Burn Plan and at the AAR indicate that the District Ranger and both Deputies are experienced and engaged in the prescribed fire and wildfire suppression activities taking place on the Forest. The District Ranger has a Line Officer certification level of "Advanced" and was present on the fire during the decision making process leading up to the wildfire declaration.

## **6. A review of the qualifications and experience of key personnel involved.**

A review of the Burn Plan and minimum required organization revealed that the minimum organization and equipment required was met and exceeded. All individuals participating on the burn are qualified and experienced in the position they occupied. All competencies and experience for these individuals was captured and recorded in ROSS.

## **7. A summary of causal agents contributing to the wildfire declaration.**

1) Environmental parameters were out of prescription for RH and winds for multiple days, before during and after wildfire declaration.

2) Fire could not be contained within the burning period (burnout was postponed until following day due to more favorable wind conditions).

3) State resources responded to burn and proceeded with suppression operations. Since we do not have a mechanism to reimburse state resources with fuels money and the State responded as if requested to a wildfire within the mutual aid response area, the issue became cloudy as to whether they should have been there at all. Discussions have begun across the Forest to re-evaluate listing State resources as contingency on our burn plans. Is there an opportunity to amend cooperative agreements to allow State resources to assist on prescribed burns?

## **LESSONS LEARNED-ADDITIONAL CONSIDERATIONS**

A formal After Action Review (AAR) was facilitated on February 24, 2012. The participants included Fire Management and Rx staff from the unit and the Forest, District Ranger and Deputies, as well as Rx Burn bosses from the unit. The following topics were discussed during the AAR.

-Indicators

During the AAR discussions regarding weather conditions and fire behavior indices at the time of the initial burn it was recognized that Energy Release Component and Burning Index were about average, as was KBDI. However, there is a consensus that KBDI is not a valuable indicator right now because the cumulative drought is not reflected. Swamps are dry and ground water has not re-charged due to lack of tropical moisture over the past couple of years (Apalachicola River is normally at 17 feet. Recent water levels have been averaging 2-4 feet). This has meant that swamps (100 year fire return interval) are now actively burning or at least holding heat for many weeks. Perhaps 1000 hour Fuel Moistures and ground water levels should be looked at closer.

#### -Go Bigger

It is important for our organic soils to burn. When we have an opportunity for these swamps to burn because of lower water tables and drought, it is an opportunity for us to recognize that it may be time for this type of fire occurrence. If we can be strategic about where we allow these Rx burns and wildfires to burn, instead of limiting the size of the fires because of smoke issues maybe it is time for us to go bigger rather than smaller. Smoke issues and safety concerns tend to be the biggest limiting factor to this train of thought, but if we allow these fuels to burn now under these dryer conditions it will likely mean fewer issues down the road in regard to smoke, firefighter and public safety, and resistance to control. Recommendations include adding adjacent burn units to the Rx plan and having flexibility of operations that would include burning those units if necessary in order to contain possible slops and add additional acres of swamp to completion totals. Apalachicola and SO Fire Management will continue to have conversations regarding future planning.

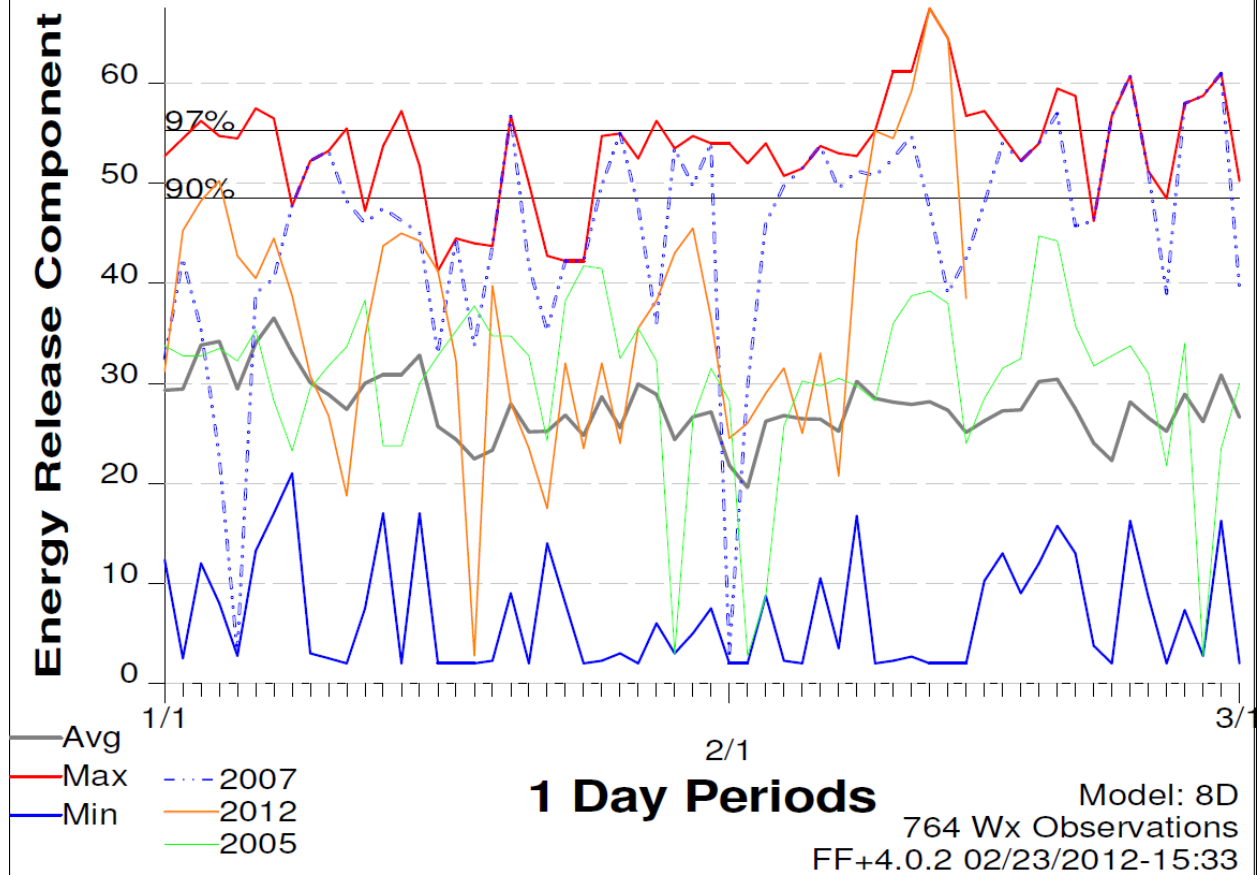
#### -Funding

It was recognized that there needs to be an easy way to compensate state resources for their efforts when we utilize them as part of our contingency planning. It is not clear as to whether or not there is a funding mechanism to reimburse state resources for support on Rx burns. We can set up reimbursable accounts ahead of time for other agencies. This is something that can be dealt with during the planning process, but for state resources this does not seem to be the case. Currently, when we use them tactically while implementing our contingency actions, they are in *suppression* mode based on their protocol. Our AOP states that we do not reimburse during our first 24 hours. Does this only apply to suppression on a wildfire? The recommendation from the group is to clarify these issues and is to truly have funding mechanisms in place to reimburse all resources that may be used in this capacity; internal, interagency, and external. Forest Fire Staff will work with Regional Office on protocol and possible agreements.

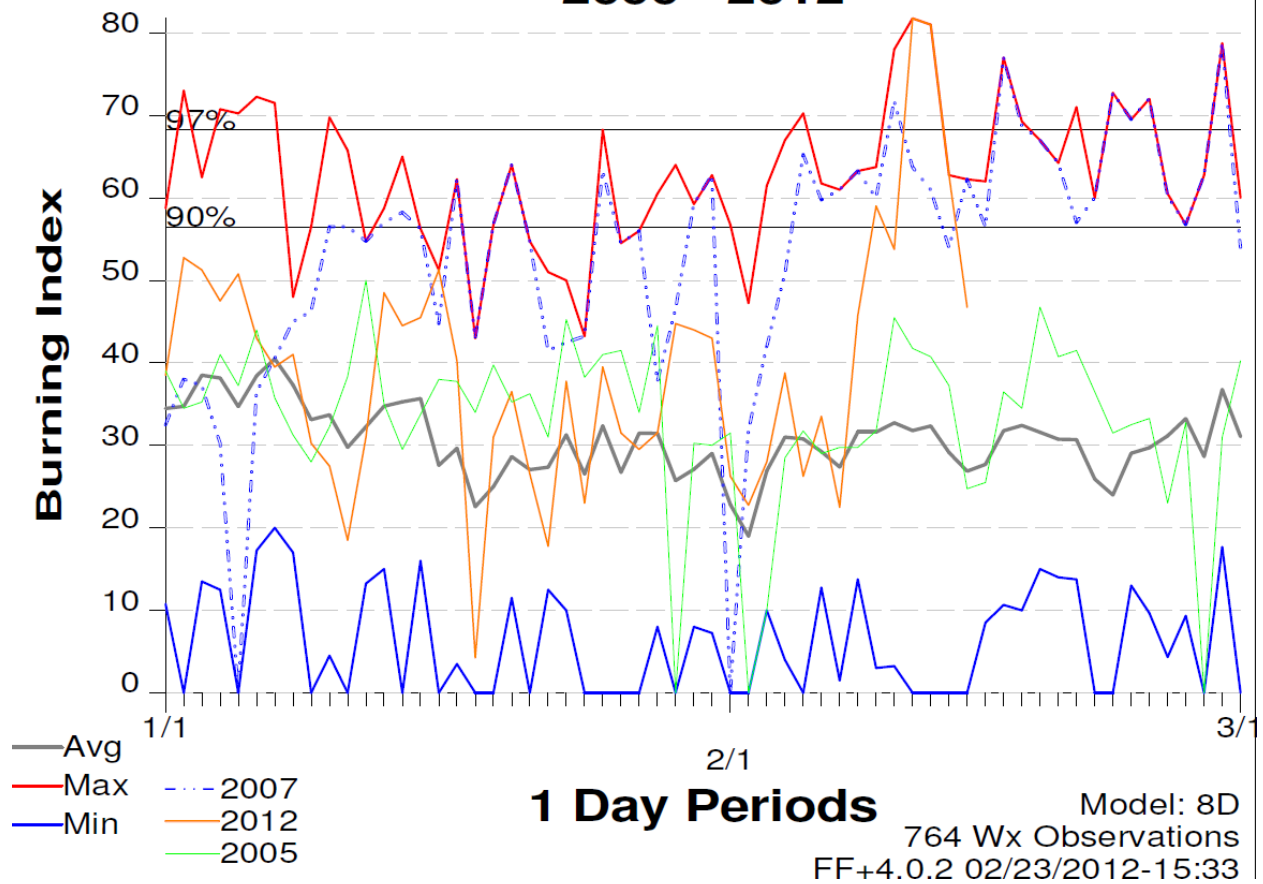
#### -Smoke

State burn permitting and sensitivity of smoke by the public are issues that add pressure to keep our burn units small and actively suppress active smokes in our swamps when they are ongoing. Recent fatal traffic accidents on public highways due to fog and smoke have heightened sensitivity to these concerns. During the escape Rx fire decision process this was a major concern. The AAR group's recommendation would include interagency efforts to emphasize these safety issues to the public and build their awareness of the consequences of not burning in an effort to build more support for Rx burning. The Apalachicola NF/National Forests in Florida are active members of the North Florida Prescribed Fire Council. These smoke issues are the topic of ongoing discussions with our interagency partners. One of the action items from the AAR was that Fire Staff from the National Forests in Florida would engage Public Service Staff and work on a plan to be proactive about our public outreach emphasizing smoke management as it relates wildfire and prescribed fire and the importance of fire in habitat management as well as hazardous fuels reduction.

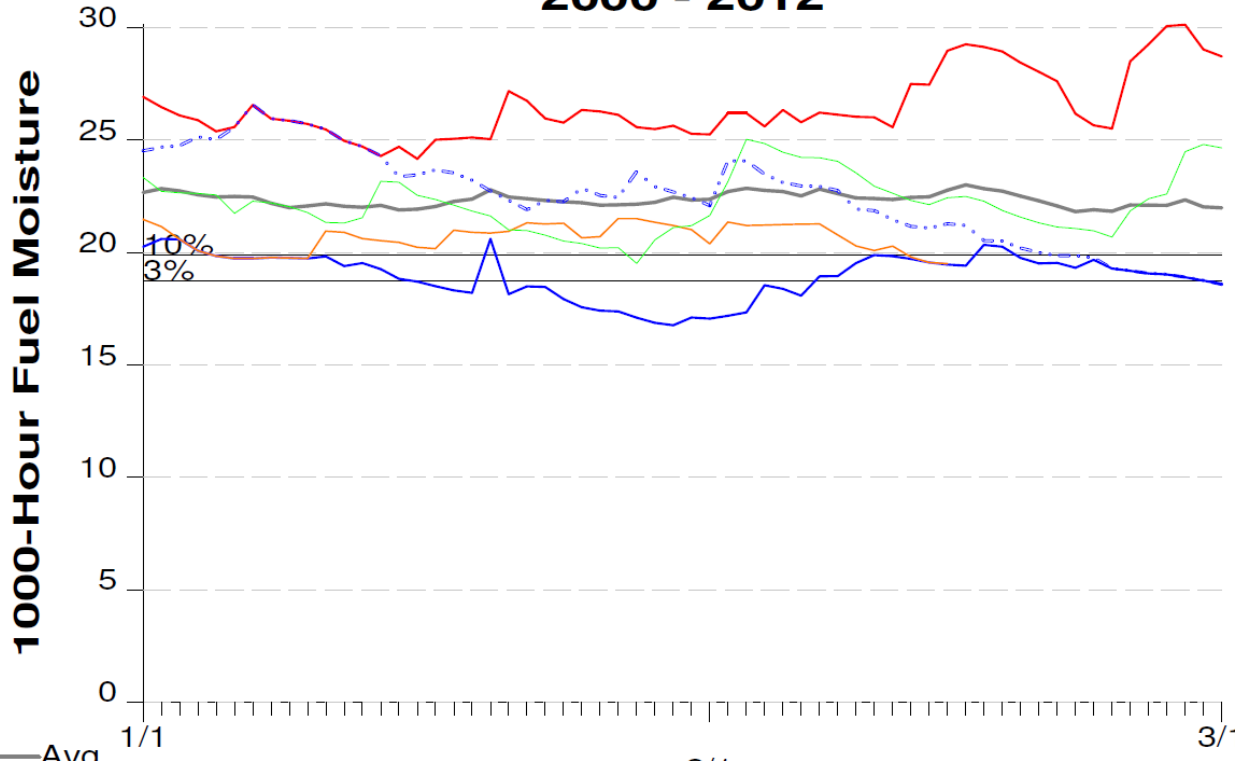
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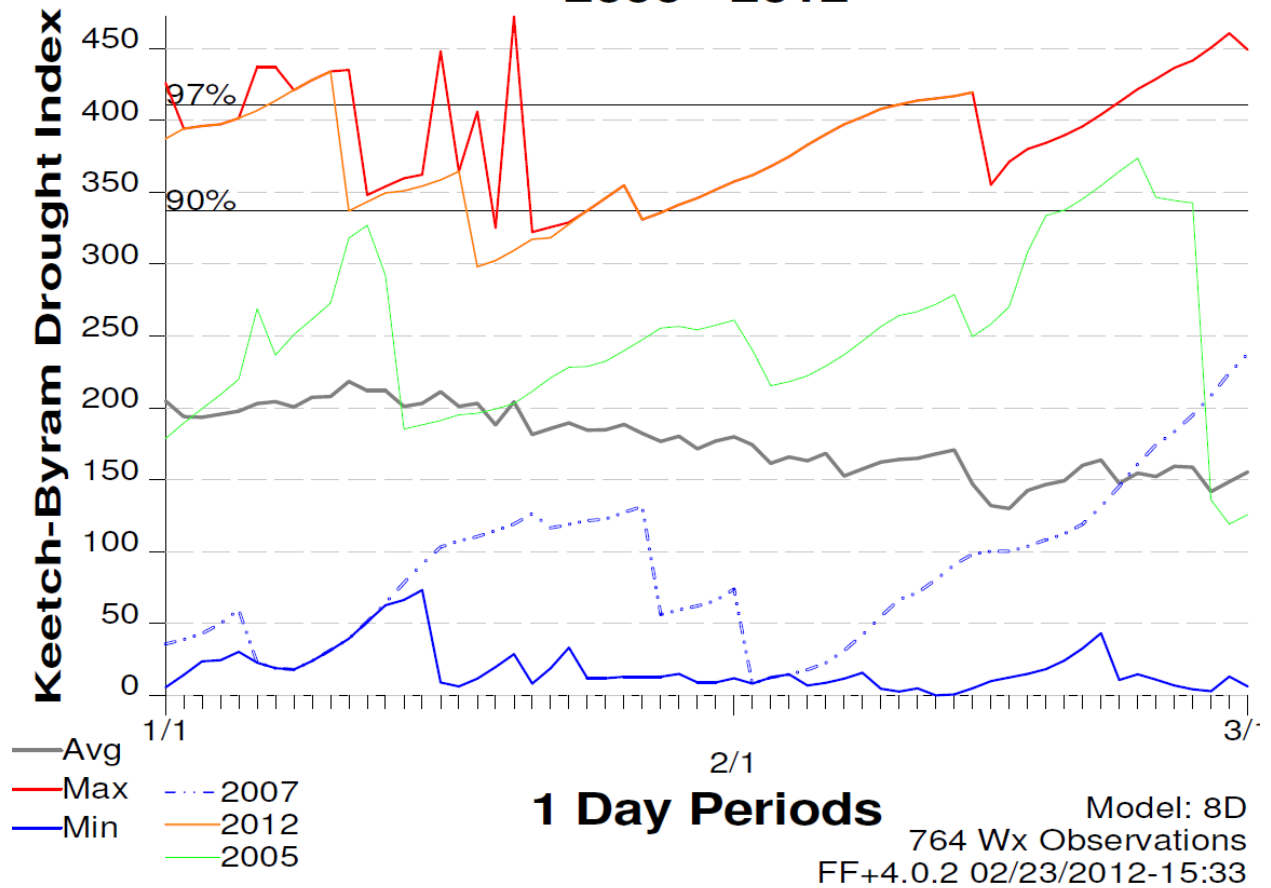


— Avg  
— Max  
— Min  
····· 2007  
— 2012  
— 2005

**1 Day Periods**

Model: 8D  
764 Wx Observations  
FF+4.0.2 02/23/2012-15:33

# SIG - Apalach 2000 - 2012









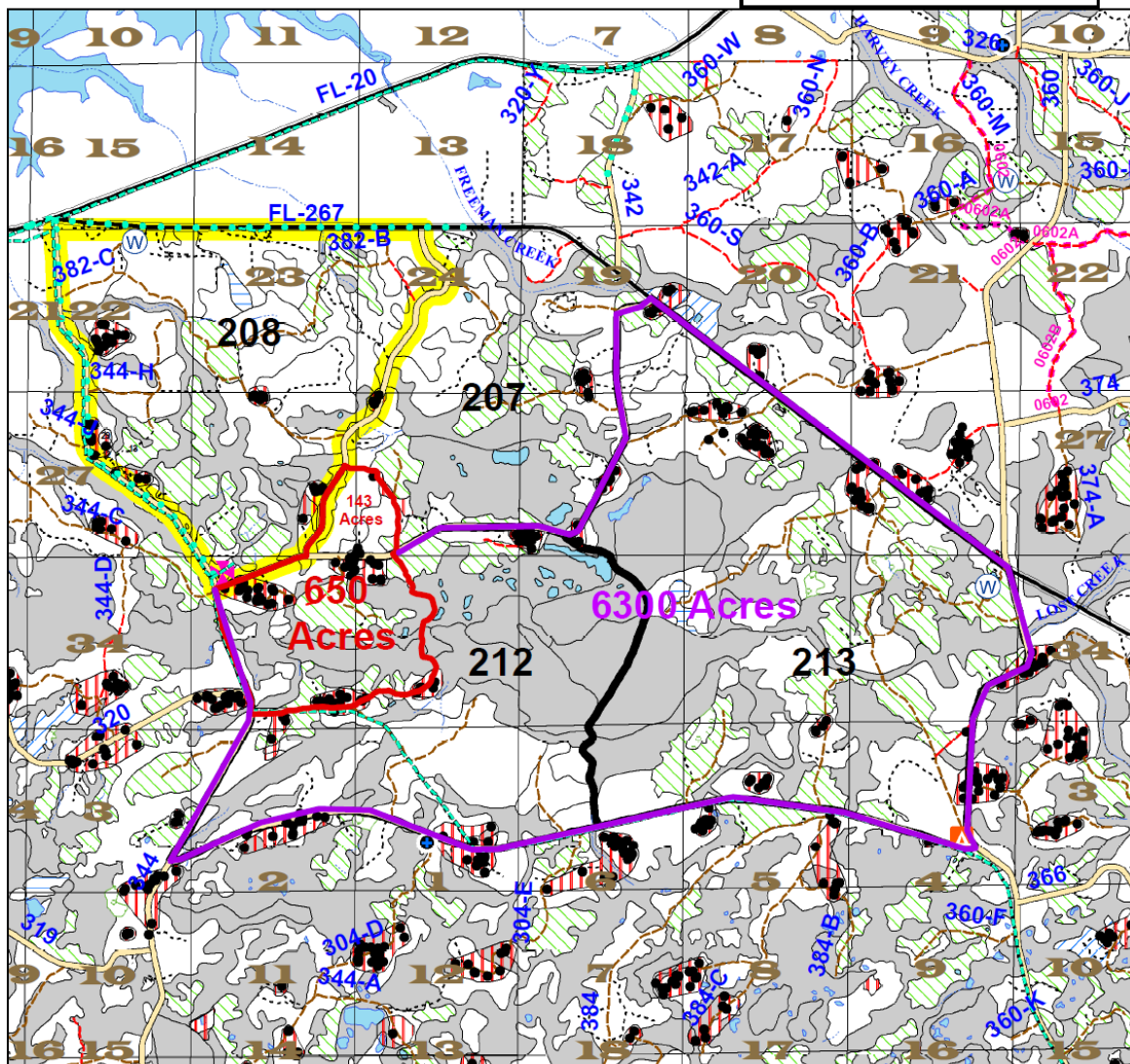
Wakulla Ranger District  
Apalachicola National Forest

Grand Bay Fire  
793 Acres

Feb. 12, 2012



- Legend**
- Grand Bay Fire
  - Dip Sites
  - Cemetery
  - Recreation Site
  - Utility Type
    - ELECTRIC
    - GAS
    - TELEPHONE
  - Towers
  - RCW Trees
  - rcwtrees
  - Borrowpit
  - Flatwoods Salamander
  - Railroad
  - Paved Road
  - Graded Road
  - Woods Road
  - Admin Road
  - Old Roads / Trails
  - Trails
  - Progeny Test
  - Private Boundary
  - Streams
  - RCW Cluster
  - Burn Boundary
  - Burn Boundary
  - Young Longleaf
  - Young Slash or Lob
  - Sapling Pines
  - Savannah
  - Swamp



2/17/2012  
M. Owen

1 0.5 0 1 Miles