



Steven W. Troxler  
Commissioner

North Carolina Department of Agriculture  
and Consumer Services  
*N.C. Forest Service*



Scott Bissette  
Assistant Commissioner

October 1, 2013

Honorable Members of the Joint Legislative Commission on Governmental Operations, Senate and House Appropriations Subcommittee on Natural and Economic Resources, Fiscal Research Division:

On behalf of the Department of Agriculture and Consumer Services, I respectfully submit the Annual Report on Wildfires, completed in accordance with the requirements of G.S. 106-911. I am available to answer questions regarding the results of the Department's review. I look forward to working with each of you to achieve the desired results of this report.

Respectfully,

Scott Bissette

Attachment

Cc: Steve Troxler, Commissioner, NC Department of Agriculture and Consumer Services  
David Smith, Chief Deputy Commissioner, NC Department of Agriculture and Consumer Services  
Tina Hlabse, General Counsel, NC Department of Agriculture and Consumer Services  
Joy Hicks, Policy Development Analyst, NC Department of Agriculture and Consumer Services



**N.C. DEPARTMENT OF AGRICULTURE  
AND CONSUMER SERVICES  
NORTH CAROLINA FOREST SERVICE**



**ANNUAL LEGISLATIVE REPORT ON WILDFIRES**

October 1, 2013

Agriculture Commissioner Steve Troxler  
Assistant Commissioner Scott Bissette

Pursuant to G.S. 106-911, the North Carolina Department of Agriculture and Consumer Services, North Carolina Forest Service respectfully submits this annual report on wildfire in North Carolina for Fiscal Year 2013.

## **STATUTORY REQUIREMENT**

### **§ 106-911. Annual report on wildfires**

No later than October 1 of each year, beginning October 1, 2012, the Commissioner shall submit a written report on wildfires in the State to the chairs of the House Appropriations Subcommittee on Natural and Economic Resources and the Senate Appropriations Committee on Natural and Economic Resources, the Joint Legislative Commission on Governmental Operations, and the Fiscal Research Division of the General Assembly. The report shall include the following information for all major or project wildfires during the prior fiscal year:

- (1) The date, location, and impacts (property damage and any casualties) from the wildfire.
- (2) The following data for firefighters and related support personnel involved in fighting the wildfire:
  - a. Total overtime hours worked.
  - b. Total compensation paid for overtime.
  - c. The portion of compensation paid that was reimbursed to the State.
- (3) The fiscal impact of the wildfire, including total costs, reimbursable costs, and costs incurred by the State.

## **OVERVIEW OF FIRE CONTROL**

There are more than 18 million acres of woodland in North Carolina. Wildfire is one of the greatest threats to this important and valuable natural resource. The North Carolina Forest Service (NCFS) is responsible for protecting state and privately-owned forestland from forest fires. The NCFS forest fire protection program is managed on a cooperative basis with the State's county governments. All one hundred counties participate in the program. Emphasis in the fire program includes fire prevention efforts, pre-suppression activities (including extensive training of personnel and cooperators), aggressive suppression efforts on all wildfires, and law enforcement follow-up.

NCFS, local fire departments, and communities across the State are working together to prevent, prepare for, and lessen the impact of wildfires. Maintaining a well-trained, proficient forest fire control organization is very similar to maintaining a well trained army. Fire training occurs year-round. New personnel are constantly being trained to preserve capabilities. Veteran fire fighters regularly undergo refresher training in suppression tactics, strategy, organization, and management.

A study conducted by the U.S. Forest Service and the University of Wisconsin-Madison indicated that North Carolina leads the nation in the amount of area classified as wildland-urban interface (WUI). The WUI is the area where structures and other human development meet or intermingle with undeveloped wildland, forest, or vegetative fuels. While North Carolina has the most WUI

acres, it also ranks fifth in most housing units within the WUI. The interface creates great challenges for fire managers, as nearly every fire or its associated smoke may impact homes, roads, farms, or other development.

Table 1 illustrates the need to keep fires as small as possible through early detection and rapid response, which are critical to reducing fire size, protecting property, and minimizing overall loss. From FY03-13, 279,675 acres of woodland burned in North Carolina wildfires. Of these, 144,328 acres, or 51.6%, were burned in fires larger than 100 acres. However, 100+ acre fires only made up 0.54% of the total fires for this 10-year period.

**Table 1: Historical Wildfire Activity**

<b>FY</b>	<b>Fires</b>	<b>Acres</b>	<b>100+ Acre Fires</b>	<b>Acres Burned</b>	<b>Percent of Total Fires</b>	<b>Percent of Acreage Burned on 100+ Ac. Fires</b>
<b>2003/04</b>	4,621	15,966.40	11	2,304	0.24%	14.4%
<b>2004/05</b>	3,588	13,345.40	15	2,218	0.42%	16.6%
<b>2005/06</b>	5,778	27,943.00	13	2,835	0.22%	10.1%
<b>2006/07</b>	5,528	28,331.30	42	13,863	0.76%	48.9%
<b>2007/08</b>	6,086	59,377.50	63	38,113	1.04%	64.2%
<b>2008/09</b>	3,723	14,966.20	18	5,056	0.48%	33.8%
<b>2009/10</b>	3,023	10,903.60	16	3,347	0.53%	30.7%
<b>2010/11</b>	5,701	85,857.40	36	70,166	0.63%	81.7%
<b>2011/12</b>	3,259	11,958.00	14	2,779	0.43%	23.2%
<b>2012/13</b>	3,542	11,026.30	14	3,647	0.40%	33.1%
<b>Total</b>	<b>44,849</b>	<b>279,675</b>	<b>242</b>	<b>144,328</b>	<b>0.54%</b>	<b>51.6%</b>
<b>Average</b>	<b>4,485</b>	<b>27,968</b>	<b>24.2</b>	<b>14,433</b>	<b>0.54%</b>	<b>51.6%</b>

## SUMMARY OF ALL WILDFIRE DATA FOR FY12/13

From July 1, 2012 through June 30, 2013, there were 3,542 State jurisdictional wildfires<sup>1</sup> that burned on 11,026 acres. The average fire size was 3.1 acres with the largest fire being 675 acres (Pilot Mountain Fire).

### Effects of weather

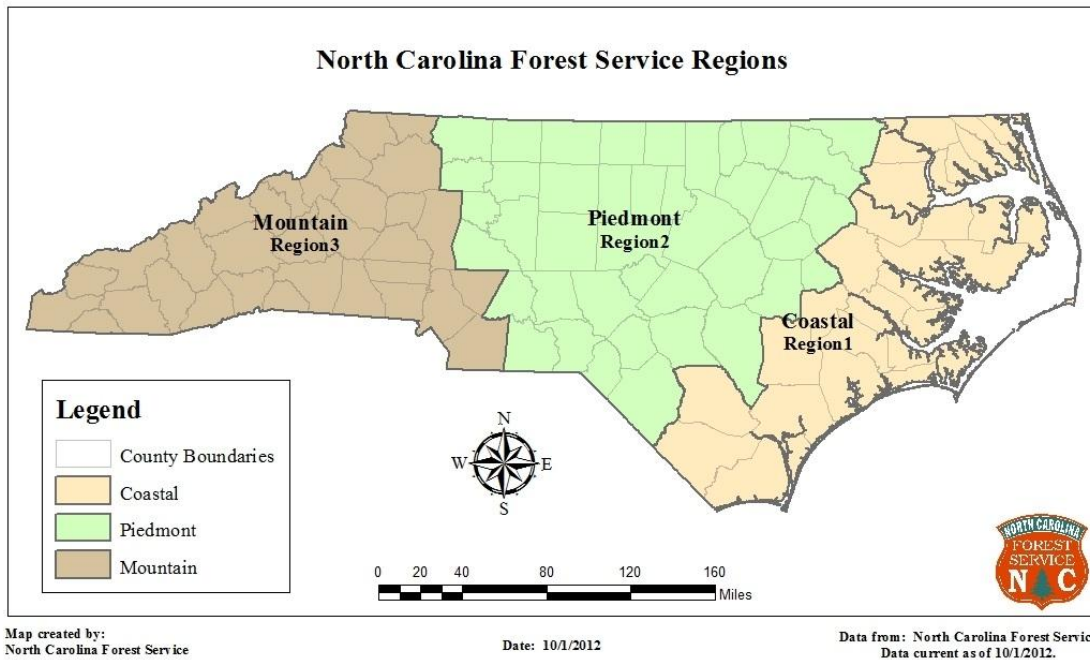
Weather has the greatest effect on wildfire danger in the State and the weather for this time period was conducive for keeping fire activity and acres burned at a very low level compared to years past. Statewide average precipitation for January was the 17th wettest, February was the 50th wettest,

<sup>1</sup> NCFS has the statutory (G.S. 106-895) requirement of prevention and control of forest fires in any and all parts of this State with the exception of Federal Government owned property. Through administrative decision, areas within municipal limits are considered beyond the jurisdiction of the Forest Service.

March was the 22nd driest, April was the 18th wettest, May was the 43rd wettest, and June was the 2nd wettest since 1895.

November was the most active month where 10 fires occurred in various counties that had either a residence or structure destroyed, or burned over 100 acres. November 2012 and March 2013 were the most active months with respect to number of fires and acres burned. The two months had 1,529 or 43% of the fires for the year with 6,129 acres burned or 56% of the acres burned for the year.

Tables 2 through 6 outline all FY13 wildfires occurring by region, including estimated damages and causes.



**Table 2: Wildfires by Region (All Fires FY13)**

NCFS Region	# of Wildfires	Wildfire Acres
Coastal	483	3,240.40
Piedmont	1,888	6,055.80
Mountains	1,171	1,730.10
<b>Total</b>	<b>3,542</b>	<b>11,026.30</b>

**Table 3:** Property Protected [1]/Damage by Region (All Fires FY13)

NCFS Region	Homes and Structures Protected	Est. Value of Homes and Structures Protected	Homes and Structures Damaged or Destroyed	Est. Value of Homes And Structures Damaged or Destroyed	Est. Value of Other Property Damaged (Timber, Livestock, Crops, Vehicles)
Coastal	825	\$95,143,116	30	\$153,750	278,155
Piedmont	2,926	\$209,471,940	1,134	\$740,450	735,425
Mountains	1,420	\$166,671,191	79	\$401,190	160,610
<b>Total</b>	<b>5,171</b>	<b>\$471,286,247</b>	<b>1,243</b>	<b>\$1,295,390</b>	<b>\$1,174,190</b>

**Table 4:** Wildfire Causes (All Fires FY13)

Wildfire Cause	# of Wildfires	Wildfire Acres
Camping	45	416.00
Children	216	266.90
Debris Burning	1,411	3,814.20
Fireworks	25	288.00
Incendiary	625	3,594.60
Lightning	89	550.40
Machine Use	369	1,046.50
Miscellaneous	632	920.10
Railroad	24	69.60
Smoking	103	58.20
Unknown	3	1.80
<b>Total</b>	<b>3,542</b>	<b>11,026.30</b>

**Table 5:** Top Five Counties with the greatest number of fires in FY13

County	NCFS Region	# of Wildfires	Wildfire Acres
Richmond	Piedmont	<b>208</b>	476.1
Harnett	Piedmont	<b>143</b>	286.7
Caldwell	Mountain	<b>107</b>	232.6
Robeson	Piedmont	<b>106</b>	1,650.7
Scotland	Piedmont	<b>94</b>	634.5

**Table 6:** Top Five Counties with most Acres Burned by Wildfire in FY13

County	NCFS Region	# of Wildfires	Wildfire Acres
Robeson	Piedmont	106	<b>1,650.7</b>
Surry	Piedmont	45	<b>698.1</b>
Carteret	Coastal	25	<b>682.6</b>
Scotland	Piedmont	94	<b>634.5</b>
Onslow	Coastal	40	<b>559.6</b>

## MAJOR OR PROJECT WILDFIRE DATA FOR FY13

Thirty-two (32) major or project fires had a start date of July 1, 2012 through June 30, 2013.

NCFS classifies a major or project fire when any of the following occurs:

- A wildfire is 100 acres or more in size.
- Any inhabited or inhabitable dwelling has been destroyed.
- Any structure valued at \$15,000 or greater has been destroyed.
- A firefighter is killed.
- Any significant firefighter injury occurs that requires an emergency room visit or hospitalization.
- An Incident Management Team (Type 1, 2, or 3) is assigned to the incident.
- Other significant events in which a significant commitment of wildland fire resources has occurred.
- Central Office funding is requested.<sup>2</sup>

Table 7 shows the dates, locations, and impacts of each of the 32 major or project wildfires. It is important to note that while Table 7 shows approximately \$825,160 in property damage/loss to homes and structures, on those same wildfires 154 homes and structures with an estimated value of \$13,068,000 were protected.

Of the 32 fires 12 were considered major fires due to the fire size, 18 were considered major due to the value of structures lost or damaged and two fires were considered project fires due to the cost and difficulty of control. Project fires are shown in bold in Tables 7 through 9.

<sup>2</sup> When the cost of responding to an incident is projected to be more than the field unit can afford, financial support from the NCFS Raleigh Headquarters (Central Office) budget can be requested. Recently, the NCFS Central Office "fire contingency budget" has been limited to \$200,000. This has proven to be insufficient for multiple project or major fires, as shown in FY13.

**Table 7:** FY13 Major or Project Fires - Dates, Locations, and Impacts

County	Fire Name	Fire Start Date	Fire Out Date	Area Burned Total	Homes And Structures Damaged Or Destroyed	Estimated Value Of Homes And Structures Damaged Or Destroyed	Estimated Value Of Other Property Damaged (Timber, Livestock, Crops, Vehicles)
Alexander	Happy Plains	11/10/2012	11/10/2012	0.1	4	\$42,000	\$0
Bertie	Independence Day	7/4/2012	7/5/2012	106.0	0	\$0	\$0
Buncombe	Burnt Basement	11/17/2012	11/17/2012	0.3	1	\$100,000	\$0
<b>Caldwell</b>	<b>High Eagle</b>	<b>11/26/2012</b>	<b>12/2/2012</b>	<b>175.0</b>	<b>0</b>	<b>\$0</b>	<b>\$17,000</b>
Carteret	Pettiford Creek	3/29/2013	3/30/2013	603.0	0	\$0	\$0
Dare	Baum Point	7/5/2012	7/5/2012	281.0	0	\$0	\$0
Davidson	Bald Mountain	11/25/2012	11/27/2012	115.0	0	\$0	\$0
Davie	Lake Louise	11/6/2012	11/6/2012	0.2	1	\$80,000	\$30,000
Duplin	Perry Miller Road	3/17/2013	3/17/2013	2.0	3	\$35,000	\$0
Gaston	Whippoorwill	11/6/2012	11/6/2012	1.5	1	\$50,000	\$0
Harnett	Stockyard Road	2/2/2013	2/2/2013	2.0	1	\$85,000	\$10,000
Lenoir	Bull Town Road	1/24/2013	1/24/2013	170.0	0	\$0	\$3,000
Martin	Big Mill	4/11/2013	4/11/2013	0.5	1	\$30,000	\$5,000
Montgomery	Fiat	12/23/2012	12/23/2012	0.3	1	\$30,000	\$0
Montgomery	Fairview Farm	3/29/2013	3/29/2013	150.0	0	\$1,860	\$0
Onslow	Can't Catch It Fire	3/10/2013	4/2/2013	491.0	1	\$500	\$50,000
Polk	Fender Fire	2/18/2013	2/18/2013	0.2	2	\$25,000	\$0
Richmond	Happy 4th of July	7/4/2012	7/4/2012	10.0	2	\$8,500	\$14,500
Richmond	Low Rider	10/30/2012	10/30/2012	101.0	1	\$5,000	\$7,000
Richmond	Disaster Zone	2/6/2013	2/6/2013	2.0	3	\$20,000	\$0
Robeson	Sherman Rd	3/15/2013	3/19/2017	350.0	0	\$0	\$10,000
Rowan	Barber Junction	11/9/2012	11/9/2012	0.2	0	\$0	\$0
Rutherford	Camp Creek	11/29/2012	12/2/2012	147.0	0	\$0	\$0
Sampson	Hogan Fire	11/2/2012	11/2/2012	0.2	1	\$50,000	\$0
Scotland	Pate 2 Caught It	3/29/2013	3/29/2013	176.0	0	\$0	\$0
Stanly	Dakota Woods	11/23/2012	11/24/2012	1.0	4	\$22,000	\$600
Stanly	Road Closed	4/10/2013	4/10/2013	3.5	1	\$15,000	\$10,000
<b>Surry</b>	<b>Pilot Mountain</b>	<b>11/8/2012</b>	<b>11/22/2012</b>	<b>675.0</b>	<b>0</b>	<b>\$0</b>	<b>\$35,000</b>
Union	Blakeney Road	10/31/2012	10/31/2012	5.0	3	\$20,000	\$0
Watauga	Penley Fire	11/10/2012	11/11/2012	107.0	1	\$300	\$0
Watauga	Bombus Hive Fire	4/11/2013	4/11/2013	3.0	1	\$5,000	\$0
Yadkin	Hartman Road	3/9/2013	3/9/2013	0.2	4	\$200,000	\$0
<b>TOTALS</b>				<b>3,679.20</b>	<b>37</b>	<b>\$825,160.00</b>	<b>\$192,100.00</b>



## Overtime Data

Employee's record time worked on an incident with a BEACON charge object. Individual charge objects are assigned for project fires and a single charge object is used for major fires. Due to budgetary reductions NCFS pays seasonal employees overtime (per FSLA and OSHR policy) and provided all permanent employee's with compensatory time. Table 8 shows the overtime hours worked, hours paid out, reimbursements and compensatory time. All major and project fires that started July 1, 2012 through June 30, 2013 were non-reimbursable.

**Table 8: Overtime/Compensatory Time for Major or project fires FY13**

County	Fire Name	Area Burned Total	Overtime Hours Worked	Overtime Paid	Reimbursements	Compensatory Time
Alexander	Happy Plains	0.1	0	\$0.00	0	0
Bertie	Independence Day	106.0	0	\$0.00	0	0
Buncombe	Burnt Basement	0.3	0	\$0.00	0	0
<b>Caldwell</b>	<b>High Eagle</b>	<b>175.0</b>	<b>958</b>	<b>\$1,323.00</b>	<b>0</b>	<b>1,242</b>
Carteret	Pettiford Creek	603.0	62	\$0.00	0	80
Dare	Baum Point	281.0	0	\$0.00	0	0
Davidson	Bald Mountain	115.0	157	\$142.00	0	213
Davie	Lake Louise	0.2	0	\$0.00	0	0
Duplin	Perry Miller Road	2.0	0	\$0.00	0	0
Gaston	Whippoorwill	1.5	16	\$0.00	0	24
Harnett	Stockyard Road	2.0	0	\$0.00	0	0
Lenoir	Bull Town Road	170.0	0	\$0.00	0	0
Martin	Big Mill	0.5	8	\$0.00	0	11
Montgomery	Fairview Farm	150.0	0	\$0.00	0	0
Montgomery	Fiat	0.3	0	\$0.00	0	0
Onslow	Can't Catch It Fire	491.0	245	\$0.00	0	360
Polk	Fender Fire	0.2	0	\$0.00	0	0
Richmond	Disaster Zone	2.0	0	\$0.00	0	0
Richmond	Happy 4th of July	10.0	0	\$0.00	0	0
Richmond	Low Rider	101.0	0	\$0.00	0	0
Robeson	Sherman Rd	350.0	33	\$0.00	0	49
Rowan	Barber Junction	0.2	0	\$0.00	0	0
Rutherford	Camp Creek	147.0	183	\$0.00	0	270
Sampson	Hogan Fire	0.2	0	\$0.00	0	0
Scotland	Pate 2 Caught It	176.0	0	\$0.00	0	0
Stanly	Dakota Woods	1.0	0	\$0.00	0	0
Stanly	Road Closed	3.5	0	\$0.00	0	0
<b>Surry</b>	<b>Pilot Mountain</b>	<b>675.0</b>	<b>2,178</b>	<b>\$1,671.00</b>	<b>0</b>	<b>2,792</b>
Union	Blakeney Road	5.0	0	\$0.00	0	0
Watauga	Bombus Hive Fire	3.0	0	\$0.00	0	0
Watauga	Penley Fire	107.0	0	\$0.00	0	0
Yadkin	Hartman Road	0.2	0	\$0.00	0	0
<b>TOTAL</b>		<b>3,679.2</b>	<b>3,840</b>	<b>\$3,136.00</b>	<b>0</b>	<b>5,041</b>

## **Fiscal Impacts**

NCFS tracks cost information for reimbursable<sup>3</sup> and billable<sup>4</sup> fires. All major and project fires that started between July 1, 2012 and June 30, 2013 were non-reimbursable/non-billable. Actual fiscal impact data could not be gathered for fires as they were all handled within local county budgets. However, our fire reporting system does track estimated costs. These estimated costs include employee salary (based on an average salary of \$20/hour) and equipment use rates. The State's out-of-pocket expenses for project fire cost are tracked in individual budget centers. The two projects fires for FY13 had out-of-pocket expenses of \$39,693.

Table 9 shows the estimated cost of each of the 30 non-reimbursable/non-billable fires based cost estimates provided in the NCFS Fire Reporting System. The cost shown for the two project fires includes the State's out-of-pocket expenses and the fire report cost estimates.

---

<sup>3</sup> Reimbursable Fires – A fire where NCFS may obtain a reimbursement of funds from FEMA, U.S. Forest Service, or other agencies.

<sup>4</sup> Billable Fires – Fires where NCFS has a cost share or cooperative agreement, or provided suppression services to a Federal Agency.

**Table 9: FY12 Estimated Fiscal Impacts**

County	Fire Name	Fire Started Date	Fire Out Date	Area Burned Total	Suppression Cost	Reimbursement	State Costs
Alexander	Happy Plains	11/10/2012	11/10/2012	0.1	\$1,325	0	\$1,325
Bertie	Independence Day	7/4/2012	7/5/2012	106.0	\$5,080	0	\$5,080
Buncombe	Burnt Basement	11/17/2012	11/17/2012	0.3	\$700	0	\$700
<b>Caldwell</b>	<b>High Eagle</b>	<b>11/26/2012</b>	<b>12/2/2012</b>	<b>175.0</b>	<b>\$313,347</b>	<b>0</b>	<b>\$313,347</b>
Carteret	Pettiford Creek	3/29/2013	3/30/2013	603.0	\$16,000	0	\$16,000
Dare	Baum Point	7/5/2012	7/5/2012	281.0	\$4,599	0	\$4,599
Davidson	Bald Mountain	11/25/2012	11/27/2012	115.0	\$11,430	0	\$11,430
Davie	Lake Louise	11/6/2012	11/6/2012	0.2	\$1,875	0	\$1,875
Duplin	Perry Miller Road	3/17/2013	3/17/2013	2.0	\$850	0	\$850
Gaston	Whippoorwill	11/6/2012	11/6/2012	1.5	\$2,775	0	\$2,775
Harnett	Stockyard Road	2/2/2013	2/2/2013	2.0	\$4,000	0	\$4,000
Lenoir	Bull Town Road	1/24/2013	1/24/2013	170.0	\$14,125	0	\$14,125
Martin	Big Mill	4/11/2013	4/11/2013	0.5	\$600	0	\$600
Montgomery	Fairview Farm	3/29/2013	3/29/2013	150.0	\$1,860	0	\$1,860
Montgomery	Fiat	12/23/2012	12/23/2012	0.3	\$405	0	\$405
Onslow	Can't Catch It Fire	3/10/2013	4/2/2013	491.0	\$50,240	0	\$50,240
Polk	Fender Fire	2/18/2013	2/18/2013	0.2	\$675	0	\$675
Richmond	Disaster Zone	2/6/2013	2/6/2013	2.0	\$1,100	0	\$1,100
Richmond	Happy 4th of July	7/4/2012	7/4/2012	10.0	\$1,815	0	\$1,815
Richmond	Low Rider	10/30/2012	10/30/2012	101.0	\$2,900	0	\$2,900
Robeson	Sherman Rd	3/15/2013	3/19/2017	350.0	\$4,260	0	\$4,260
Rowan	Barber Junction	11/9/2012	11/9/2012	0.2	\$225	0	\$225
Rutherford	Camp Creek	11/29/2012	12/2/2012	147.0	\$44,968	0	\$44,968
Sampson	Hogan Fire	11/2/2012	11/2/2012	0.2	\$1,175	0	\$1,175
Scotland	Pate 2 Caught It	3/29/2013	3/29/2013	176.0	\$2,180	0	\$2,180
Stanly	Dakota Woods	11/23/2012	11/24/2012	1.0	\$4,365	0	\$4,365
Stanly	Road Closed	4/10/2013	4/10/2013	3.5	\$2,010	0	\$2,010
<b>Surry</b>	<b>Pilot Mountain</b>	<b>11/8/2012</b>	<b>11/22/2012</b>	<b>675.0</b>	<b>\$214,421</b>	<b>0</b>	<b>\$214,421</b>
Union	Blakeney Road	10/31/2012	10/31/2012	5.0	\$1,360	0	\$1,360
Watauga	Bombus Hive Fire	4/11/2013	4/11/2013	3.0	\$1,500	0	\$1,500
Watauga	Penley Fire	11/10/2012	11/11/2012	107.0	\$17,080	0	\$17,080
Yadkin	Hartman Road	3/9/2013	3/9/2013	0.2	\$3,900	0	\$3,900
<b>TOTALS</b>				<b>3,679.2</b>	<b>\$733,145</b>	<b>0</b>	<b>\$733,145</b>

## CONTACT INFORMATION

For further information, please contact:

David Lane  
N.C. Forest Service - Forest Protection Director  
[david.lane@ncagr.gov](mailto:david.lane@ncagr.gov)  
919-857-4838

Joseph Gilroy  
N.C. Forest Service – Administrative Services Director  
[joseph.gilroy@ncagr.gov](mailto:joseph.gilroy@ncagr.gov)  
919-857-4853