



**NC DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES
NORTH CAROLINA FOREST SERVICE**



ANNUAL LEGISLATIVE REPORT ON WILDFIRES

October 1, 2012

Steve Troxler, Commissioner
Wib L. Owen, State Forester

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 2012.

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 over 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 US 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 FY01-12, 377,084 acres of woodland burned in North Carolina wildfires. Of these, 199,092 acres, or 52.8%, were burned in fires larger than 100 acres. However, 100+ acre fires only made up 0.5% of the total fires for this 12-year period.

Table 1: Historical Wildfire Activity

FY	Fires	Acres	100+ Acre Fires	Acres Burned	Percent of Total Fires	Percent of Acreage Burned on 100+ Ac. Fires
2000/01	6,622	26,970.8	21	8,554.3	0.3%	31.7%
2001/02	7,749	45,503.0	44	20,880.9	0.6%	45.9%
2002/03	2,382	36,128.2	14	28,976.0	0.6%	80.2%
2003/04	4,621	15,966.4	11	2,304.0	0.2%	14.4%
2004/05	3,588	13,345.4	15	2,218.1	0.4%	16.6%
2005/06	5,778	27,943.0	13	2,835.0	0.2%	10.1%
2006/07	5,528	28,331.3	42	13,862.9	0.8%	48.9%
2007/08	6,086	59,377.5	63	38,113.4	1.0%	64.2%
2008/09	3,723	14,966.2	18	5,056.0	0.5%	33.8%
2009/10	3,023	10,903.6	16	3,346.8	0.5%	30.7%
2010/11	5,701	85,857.4	36	70,165.6	0.6%	81.7%
2011/12	3,259	11,958.0	14	2,779.0	0.4%	23.6%
Total	58,060	377,084.8	307	199,092.0	0.5%	52.8%
Average	4838	31,423.7	26	16,591.0	0.5%	40.2%

SUMMARY OF ALL WILDFIRE DATA FOR FY12

From July 1, 2011 through June 30, 2012, there were 3,259 State jurisdictional wildfires¹ that burned on 11,958 acres. The average fire size was 3.6 acres with the largest fire being 450 acres (Godfrey Creek Fire).

Effects of weather

Weather has the greatest effect on wildfire danger in the State and FY12 was certainly no exception. As we entered FY12, we had a carryover of the severe and extreme drought conditions from FY11.

¹ 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.

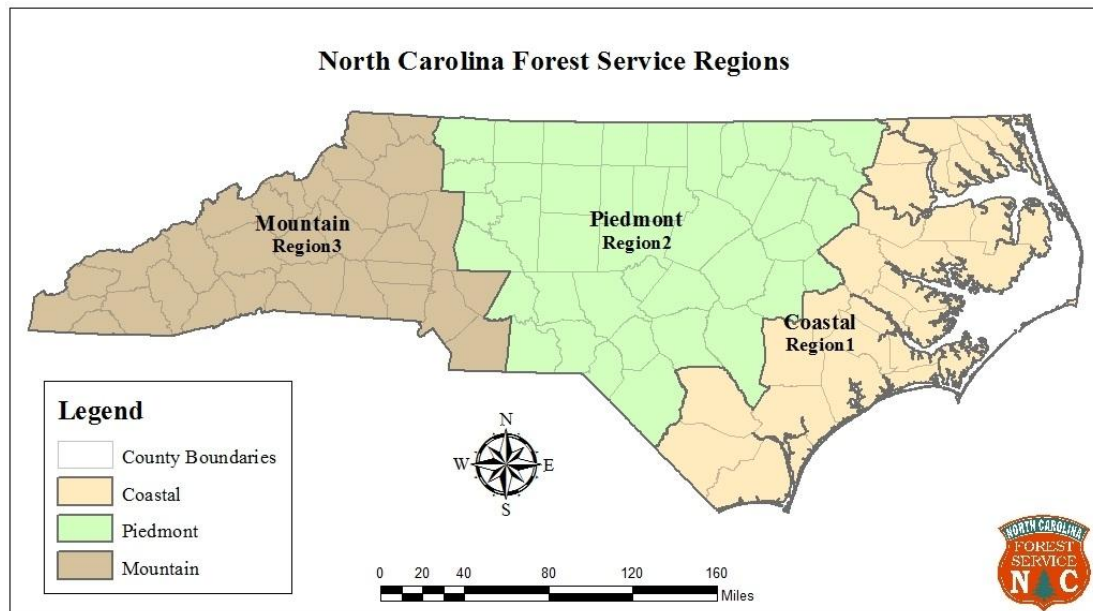
As a result, a number of wildfires that started in June 2011 continued to burn into FY12. Drought conditions for July were severe and extreme in the coastal plain. July had two times the normal number of fires and almost twice the number of acres burned compared to a ten year average.

A re-emergence of *La Niña* in the Northern Hemisphere was predicted for fall 2011, which would have worsened fire weather conditions even more. A *La Niña* often features drier and warmer winters than normal for the Southeast. Fortunately, the predicted *La Niña* did not fully develop. In August 2011, we saw a weather condition recovery and the severe and extreme drought conditions disappeared. The overall weather and fire danger conditions were favorable for the remainder of the year with respect to a reduction in ignition sources (lightning, power lines, etc.) and a reduction in fires escaping the control of the burner.

Tables 2 – 6 outline all FY12 wildfires occurring by region, including estimated damages and causes.

Table 2: Wildfires by Region (All Fires FY12)

Region	# of Wildfires	Wildfire Acres
Coastal	716	2,981.2
Piedmont	1,574	7,487.7
Mountains	969	1,489.1
Total	3,259	11,958.0



Map created by:
North Carolina Forest Service

Date: 10/1/2012

Data from: North Carolina Forest Service
Data current as of 10/1/2012.

Table 3: Property Protected ²/Damage by Region (All Fires FY12)

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	1,208	\$149,161,140	37	\$157,799	1,510,150
Piedmont	2,979	\$311,260,000	98	\$373,200	408,210
Mountains	1,106	\$232,593,416	242	\$487,300	554,576
Total	5,293	\$693,014,556	377	\$1,018,299	\$2,472,936

Table 4: Wildfire Causes (All Fires FY12)

Wildfire Cause	# of Wildfires	Wildfire Acres
Camping	39	400.80
Children	206	263.80
Debris Burning	1,048	3,448.10
Fireworks	36	76.40
Incendiary	766	3,227.20
Lightning	158	1,794.40
Machine Use	375	1,408.40
Miscellaneous	527	1,101.00
Railroad	35	192.40
Smoking	68	38.00
Unknown	1	7.50
Total	3,259	11,958.00

Table 5: Top Five Counties Most Heavily Impacted by Wildfire in FY12

County	Region	# of Wildfires	Wildfire Acres
Richmond	Piedmont	183	483.2
Scotland	Piedmont	166	1,316.9
Robeson	Piedmont	145	2,471.1
Moore	Piedmont	112	121.7
Buncombe	Mountains	84	76.8

Table 6: Top Five Counties with Most Acres Burned by Wildfire in FY12

County	Region	# of Wildfires	Wildfire Acres
Robeson	Piedmont	145	2,471.1
Scotland	Piedmont	166	1,316.9
Pender	Coastal	38	576.3
Harnett	Piedmont	78	551.5
Richmond	Piedmont	183	483.2

² Property protected and damaged values are based on NCFS personnel direct observations and estimates of value. The amount of property protected is estimated based on wildfire danger conditions during the fire and an estimate of what the wildfire would have burned if it was not controlled.

MAJOR OR PROJECT WILDFIRE DATA FOR FY12

Twenty-six (26) major or project fires had a start date of July 1, 2011 through June 30, 2012.

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.³

Table 7 shows the dates, locations, and impacts of each of the 26 major or project wildfires. It is important to note that while Table 7 shows approximately \$356,000 in property damage/loss to homes and structures, 148 homes and structures with an estimated value of \$21,220,000 were protected on these same wildfires.

³ 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 FY12.

Table 7: FY12 Major or Project Fires - Dates, Locations, and Impacts

County	Fire Name	Fire Start Date	Fire Out Date	Acres Burned	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)	Fighter Injuries
Alamance	Parsons Road	03/14/2012	03/14/2012	2.00	3	67,000	5,000	0
Alexander	Anchor	02/18/2012	02/18/2012	0.30	2	66,000	800	0
Bertie	Quitsna Road	03/15/2012	03/15/2012	0.80	1	15,000	0	0
Buncombe	Robinson	10/26/2011	10/26/2011	0.70	1	60,000	0	0
Buncombe	Old Toll Rd	02/22/2012	02/22/2012	0.70	1	20,000	0	0
Camden	North Road	08/01/2011	08/15/2011	8.00	0	0	10,008	0
Camden	Lateral West ⁴	08/09/2011	08/27/2011	166.00	0	0	100,000	0
Cumberland	Rollins Bay	07/05/2011	07/14/2011	7.00	0	0	2,107	0
Durham	Penny's Bend	02/15/2012	02/16/2012	137.00	0	0	0	0
Harnett	Wildwood	07/17/2011	07/31/2011	267.00	0	0	15,050	0
Jones	Simmons Loop	07/24/2011	07/25/2011	100.00	0	0	100	0
Pender	Godfrey Creek	04/14/2012	05/05/2012	450.00	0	0	187,875	0
Richmond	Rock & Roll	04/11/2012	04/11/2012	175.00	0	0	0	0
Robeson	Fairbluff Road	07/22/2011	08/09/2011	50.00	0	0	5,025	0
Robeson	Purvis Road	12/22/2011	12/26/2011	145.00	0	0	0	0
Robeson	Flatrock Road	01/06/2012	01/08/2012	387.00	0	0	30,030	0
Robeson	Rev Bill Rd #3	02/13/2012	02/13/2012	154.00	0	0	0	0
Robeson	O'Quinn Drive-By	03/10/2012	03/13/2012	163.00	0	0	0	0
Robeson	Luke Rd. #2	03/21/2012	03/21/2012	189.00	0	0	0	0
Rutherford	Babe I'm Gonna Leave You	11/11/2011	11/12/2011	200.00	0	0	0	0
Sampson	Tire	02/24/2012	02/27/2021	7.00	0	0	0	1
Scotland	Circle Track	04/15/2012	04/15/2012	150.00	0	0	0	0
Scotland	McQueen Lake	04/24/2012	04/24/2012	137.00	0	0	0	0
Scotland	Barn Burner	06/16/2012	06/16/2012	122.00	0	0	0	0
Stokes	End Of Sauratown	02/15/2012	02/15/2012	0.70	1	31,000	0	0
Yadkin	Hwy 67	03/01/2012	03/01/2012	8.50	0	0	20	1
Total				3,027.70	9.00	259,000	\$356,015	2

⁴ Lateral West Fire was a joint-jurisdictional fire with the US Fish and Wildlife Service. Total fire size was 6,358 acres, of which 166 acres were on State jurisdictional lands.

Overtime Data

Employees record time worked on an incident with a BEACON charge object. Prior to FY13, employees used the same charge object to record all time worked on an incident, regardless of whether it was a major, project, or routine. Only billable or reimbursable incidents used a separate charge object.

Table 8 shows the total overtime hours worked (2a) by employees on the Lateral West Fire, which was the only billable incident in FY12. Overtime was not paid out (2b) for the Lateral West Fire because the incident was non-reimbursable. However, the amount that would have been paid out is also reflected in Table 8.

Table 8: Overtime data for Lateral West Fire

Overtime hours worked	Would-be OT payout cost	Amount reimbursed to State
4,004.50	\$127,838	\$0.00

NCFS has created additional charge objects to collect overtime data for all incidents beginning in FY13. This will allow us to segregate incident overtime from all other overtime for the FY13 annual report. The charge object method is only a temporary fix. When the BEACON system was in development, NCFS determined that for reporting reasons it would be helpful to have a separate leave “bucket” to track all overtime worked on all incidents. NCFS has made formal requests, most recently in May 2012, to the Office of State Personnel and Best Shared Services to have this fire overtime “bucket” implemented. A decision from OSP is still pending.

The portion of overtime compensation paid that was reimbursed to the State (2c) was zero. All major and project fires that started between July 1, 2011 and June 30, 2012 were non-reimbursable.

Fiscal Impacts

NCFS tracks cost information for reimbursable⁵ and billable⁶ fires. Twenty-five of the FY12 major or project fires were neither reimbursable nor billable. Actual fiscal impact data could not be gathered for these 25 fires as they were all handled within local county budgets. However, our fire reporting system does track estimated costs. Table 9 shows the estimated cost of each of the 25 non-reimbursable/non-billable fires based on standard personnel rates and equipment rates. NCFS is taking steps to update its fiscal tracking process for non-reimbursable fires so that we can more accurately report this information for the FY13 annual report.

Table 9: FY12 Estimated Fiscal Impacts (Non-Reimbursable)

County	Fire Name	Estimated Suppression Cost	Reimbursed Costs	Estimated Costs Incurred By The State
Alamance	Parsons Road	1,900.00	-	1,900.00

⁵ Reimbursable Fires – A fire where NCFS may obtain a reimbursement of funds from FEMA, US Forest Service, or other agencies.

⁶ Billable Fires – Fires where NCFS has a cost share or cooperative agreement, or provided suppression services to a Federal Agency.

Alexander	Anchor	475.00	-	475.00
Bertie	Quitsna Road	1,100.00	-	1,100.00
Buncombe	Robinson Fire	2,450.00	-	2,450.00
Buncombe	Old Toll Rd Fire	2,550.00	-	2,550.00
Camden	North Road	164,490.00	-	164,490.00
Cumberland	Rollins Bay	61,675.00	-	61,675.00
Durham	Penny's Bend	2,500.00	-	2,500.00
Harnett	Wildwood Fire	114,220.00	-	114,220.00
Jones	Simmons Loop Fire	19,500.00	-	19,500.00
Pender	Godfrey Creek	195,550.00	-	195,550.00
Richmond	Rock & Roll	6,675.00	-	6,675.00
Robeson	Fairbluff Road Fire	6,020.00	-	6,020.00
Robeson	Purvis Road	2,210.00	-	2,210.00
Robeson	Flatrock Road Fire	8,350.00	-	8,350.00
Robeson	Rev Bill Rd #3	1,920.00	-	1,920.00
Robeson	O'Quinn Drive-By	3,220.00	-	3,220.00
Robeson	Luke Rd. #2	7,040.00	-	7,040.00
Rutherford	Babe I'm Gonna Leave You	2,250.00	-	2,250.00
Sampson	Tire Fire	6,990.00	-	6,990.00
Scotland	Circle Track	2,040.00	-	2,040.00
Scotland	McQueen Lake	5,960.00	-	5,960.00
Scotland	Barn Burner	5,310.00	-	5,310.00
Stokes	End Of Sauratown	1,500.00	-	1,500.00
Yadkin	Hwy 67	6,990.00	-	6,990.00
Total		\$632,885.00	-	\$632,885.00

The Lateral West Fire was the only billable major or project wildfire that started in FY12. This fire was a joint-jurisdictional fire between the US Fish and Wildlife Service and NCFS. The total suppression cost of the fire was \$6,520,622.14. Table 10 shows the cost incurred by the State.

Table 10: Lateral West Fire Fiscal Impacts in FY12 (Billable Fire)

County	Fire Name	State Suppression Cost	Reimbursed Costs	Costs Incurred by the State in FY12	Carryover Costs FY13
Camden	Lateral West	\$1,717,341.43	0	1,348,743.54	368,597.89

With so many in-state resources dedicated to fighting project or major fires during the first quarter of FY12, other wildfires across the state required the assistance of additional outside resources. These resources came from other State Forest Service agencies and Federal government agencies. Table 11 shows the fiscal impacts of this additional support.

Table 11: FY12 Fiscal Impacts of Other Incident Support

County	Suppression Cost	Reimbursed Costs	Costs Incurred by the State in FY12	Carryover Costs FY13
Multi-County	\$738,061.14	0	\$687,567.64	\$50,493.50

PREVIOUS FISCAL YEAR FIRE BUDGET IMPACTS TO FY12

As this report relates only to project fires that started between July 1, 2011 and June 30, 2012, it is important to point out project fires that started in FY11 and impacted budgets in FY12.

Non-reimbursable project fires

Table 12 outlines operating costs for four non-reimbursable project fires totaling \$2,182,226.78. NCFS reduced other operating accounts, mainly those used to purchase replacement vehicles and equipment, to cover \$1,213,430.78 of this cost. This amount represented roughly 10% of the total NCFS operating budget in Fund 1510 at the beginning of FY12. The remainder of the cost, \$968,796, was covered by NCDA&CS at year-end.

Table 12: FY12 Operating Costs for Non-Reimbursable Incidents that began in FY11

Budget	Incident	Start	End	FY12 Operating Cost to State
1510 5209 5010	Juniper Road Fire	6/20/11	8/31/12	\$2,062,257.25
1510 5209 5011	Simmons Road Fire	6/22/11	7/3/11	\$75,626.25
1510 5209 5012	Blueberry Farm Fire	6/13/11	8/1/11	\$33,390.06
1510 5209 5013	Good Morning 2 Fire	6/20/11	7/27/11	\$10,923.22
Total Operating Costs				\$2,182,226.78

Over-240 payouts. Non-reimbursable incidents like the ones in Table 12 require employees to work as many as 16 hours per day for 14 consecutive days per detail. Thus, compensatory time accumulates very quickly, especially for employees who are subject to the Fair Labor Standards Act and earn overtime at time-and-a-half. Per State policy, these “subject” employees are immediately paid out for any overtime worked over 240 hours. In July and August 2011, NCFS “subject” employees accumulated and were immediately paid out for 60,720 hours of overtime over 240 for the fires in Table 12 and other non-reimbursable fires, amounting to \$1,300,822 in payouts.

Other overtime payouts. Increased fire activity typically results in more overtime accrued, more overtime paid to “subject” employees because their compensatory time is not used as often and “ages out,” and more overtime paid to temporary employees. At the start of FY12, NCFS Fund 1510 had a combined overtime budget of \$39,884. Overtime payments to temporary employees and certified employees whose compensatory time “aged out” in FY12 totaled \$504,296 in Fund 1510, a difference of (\$464,412). This represented more than a 213% increase over the last two fiscal years combined. It was the highest amount paid out of Fund 1210⁷/1510 since FY08/09.

⁷ Fund 1210 was used when NCFS was under the Department of Environment and Natural Resources. This fund number changed to 1510 after NCFS transferred to the Department of Agriculture and Consumer Services.

Table 13: FY12 Total Fiscal Impact of Incidents that began in FY11

Over-240 payouts	\$1,300,822
Other overtime paid throughout FY12	\$504,296
Operating total from Table 12	\$2,182,226.78
Total fiscal impact	\$3,987,344.78

Reimbursable incidents

The Simmons Road Fire began on June 22, 2011 and ended on August 18, 2012. On July 4, 2012, the fire was declared eligible for a Fire Management Assistance Grant (FMAG), which allowed the State to be reimbursed for up to 75% of the total cost of the fire beginning July 4. Table 13 outlines the total FY12 operating and overtime costs for the Simmons Road Fire FMAG, the cost reimbursed to the State in FY12, and the unreimbursed amount at the end of FY12.

Table 13: Simmons Road FMAG Operating and Overtime Costs through FY12

Operating Cost	Overtime Cost	Combined Cost	Reimbursed Cost	Unreimbursed/State Cost
\$2,404,204.43	\$446,695.10	\$2,850,899.53	\$2,079,499.72	\$771,399.81

CONTACT INFORMATION

For further information, please contact:

David Lane
NC Forest Service - Forest Protection Director
david.lane@ncagr.gov
919-857-4838

Joseph Gilroy
NC Forest Service – Administrative Services Director
joseph.gilroy@ncagr.gov
919-857-4853