



HURRICANE WORKFORCE ANALYSIS

HURRICANES ANDREW AND OPAL

**Florida Agency for Workforce Innovation
Labor Market Statistics**

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Hurricane Workforce Analysis

Hurricanes Andrew & Opal

Introduction

The two most severe Florida hurricanes of the last decade were Andrew and Opal. Andrew, a compact but very powerful hurricane, struck south Miami-Dade County near Homestead in late August 1992. Opal was a physically larger but less powerful hurricane and struck Escambia, Santa Rosa, Okaloosa, and Walton Counties in early October 1995, making landfall near Pensacola Beach. At landfall, Hurricane Andrew was classified as a category 5 (winds greater than 155 miles per hour) and Hurricane Opal was classified as a category 3 (winds between 111 and 130 miles per hour).

Both storms caused expensive damage and fatalities. Opal caused more deaths (60) while Andrew's death toll was 26, some of which were in Mexico and Central America. Andrew's damage was mostly due to high winds and Opal's due to storm surge. Andrew's damage was restricted mostly to Miami-Dade County and Opal's extended to the entire Emerald Coast.

The purpose of this analysis is to identify short-term industry employment changes brought on by these hurricanes. This analysis excludes active duty military stationed at the various Air Force Bases in the hurricane impact zones. It also excludes jobholders not covered by Florida's Unemployment Insurance law (some agricultural workers, self-employed, and unpaid family workers, etc.). Industry data was analyzed from 1991-1993 in Miami-Dade for Hurricane Andrew and for 1994-1996 in Florida's Emerald Coast for Hurricane Opal.

Major Findings

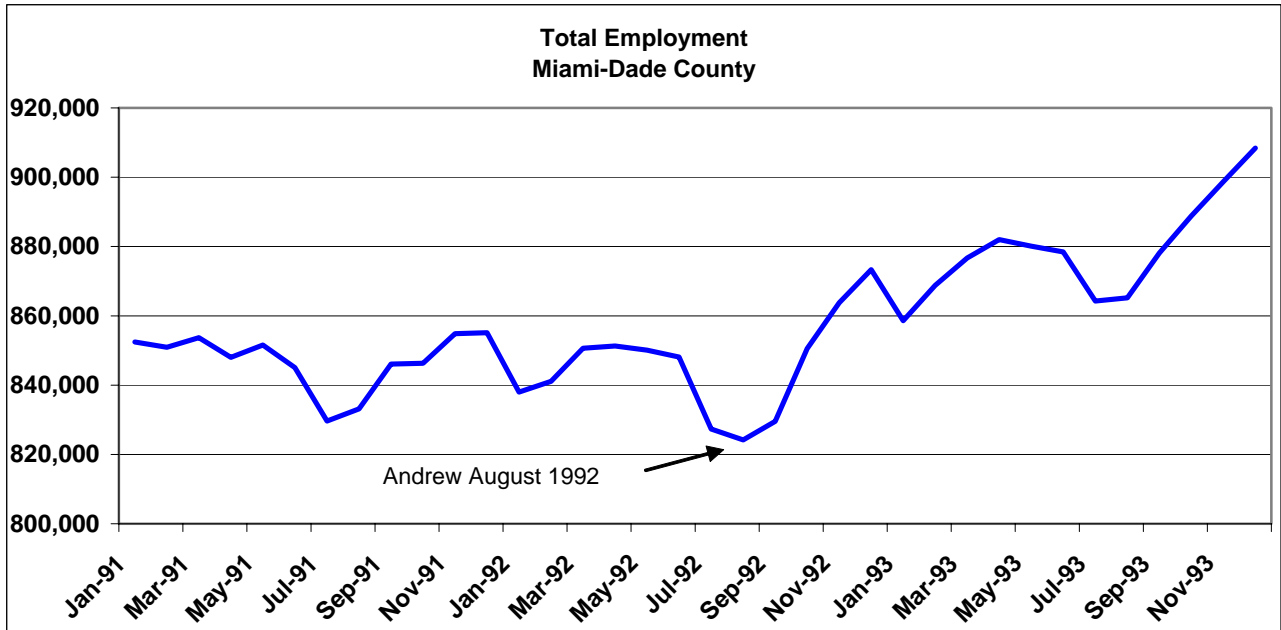
Hurricane Andrew caused employment declines in agriculture and retail trade. Employment increases were noted in all three government sectors (federal, state, and local); in building materials in retail trade, and in general building contractors and special trades contractors. Other sectors were not notably impacted by storm damage or recovery efforts.

Hurricane Opal caused increases in employment for building materials in retail trade, general building contractors and special trades contractors in both Okaloosa and Walton counties. Opal had no negative impact on tourism in Okaloosa but did cause some declines in tourism-related employment in Walton County. Escambia and Santa Rosa counties did not experience any significant change in employment due to Opal and the counties to the east of Walton County had no noticeable impact in employment levels or seasonal patterns due to Opal.

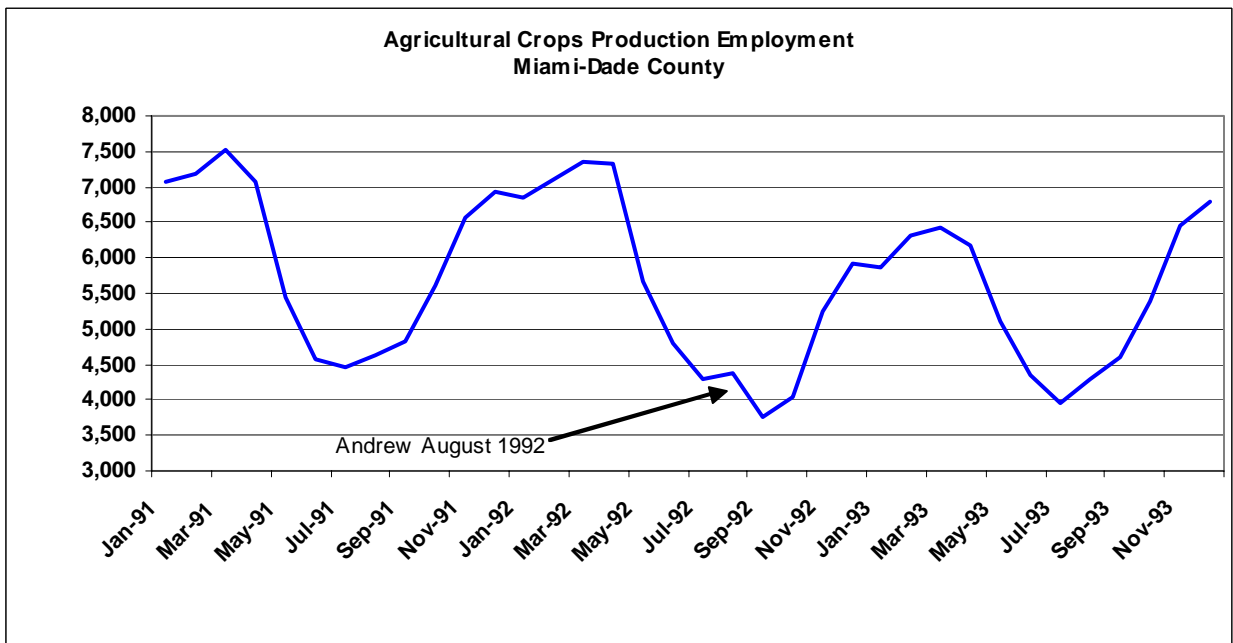
Both hurricanes caused short-term increases in unemployment rates: those for Andrew appeared to be higher, but Miami-Dade County was in the initial stages of recovery from the recession. Hurricane Opal caused short-term increases in unemployment rates in both the Fort Walton Beach metro area and in Walton County.

Hurricane Andrew

The timing of this storm (August 24, 1992) made industry analysis difficult for Miami-Dade County. August is normally the low point in the employment time series for tourism and agricultural industries. In addition, the nation was recovering from a recession, so these countervailing forces were influencing employment changes in Miami-Dade County. In August 1992, there were 824,200 jobs in Miami-Dade County as measured by the ES-202 (Quarterly Census of Employment and Wages) program, which counts employees across all industries covered by Florida's Unemployment Insurance system. Due to the recession and mass layoffs in the transportation industry in Miami-Dade County, this was down from the August 1991 level of 833,165.



Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

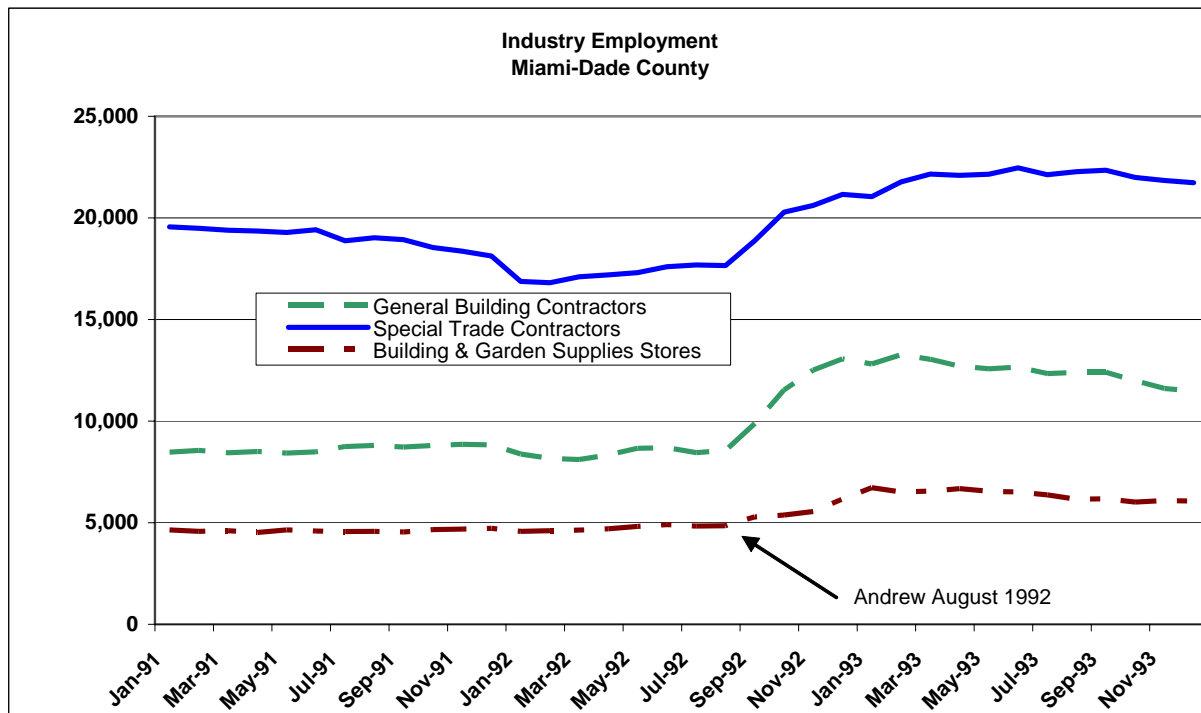


Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

Andrew seemed to cause immediate declines in employment for crops production. August 1992 employment was 4,400 and plummeted to 3,800 in September, a drop of 600 jobs. The seasonal nature of agricultural employment usually shows increases between August and September in Miami-Dade County. Most of the workers on layoff from the initial impact of Andrew would have been agricultural workers in both crops production and harvesting.

Seasonal employment patterns or levels were affected by the storm for all government sectors, federal, state, and local. Federal government immediately increased by 412 jobs and peaked in October. State government also increased by 1,000 jobs and peaked in November, while local increased by stages to a gain of 16,000 jobs by December. Some of this increase in local government was the normal hiring of school personnel in the fall. The previous year had an increase of 11,400 between August 1991 and September 1991. Local government may have added over 4,000 additional jobs to deal with the storm's impact.

Two construction sectors saw the greatest increase in employment: general building contractors and special trades contractors. Heavy construction contractors expanded slightly by 400 jobs between September and October 1992, but then returned to around 3,400 jobs in November-December as measured before Andrew. The two expanding sectors added close to 10,000 jobs by the middle of 1993 due to rebuilding from Andrew. General building contractors increased from 8,600 in August 1992 to 13,300 in February 1993 (+4,700), when employment peaked. Special trades contractors had a longer expansion cycle than general building contractors, from 17,600 in August 1992 to 22,500 in June of 1993 (+4,900). This industry had 4,900 jobs in August 1992 and peaked at 6,700 in January 1993 (+1,800).



Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

The retail trade and services industries were analyzed for employment changes. The services industry was not significantly impacted by the hurricane, the August to September change for 1992 was very close to the change for prior years. Retail trade did experience some negative impact immediately dropping by 3,400 jobs August 1992-September 1992, but quickly recovering and continuing with the normal seasonal increase October to December. This may be attributed to power outages in Miami-Dade County, in addition to the destruction of retail stores.



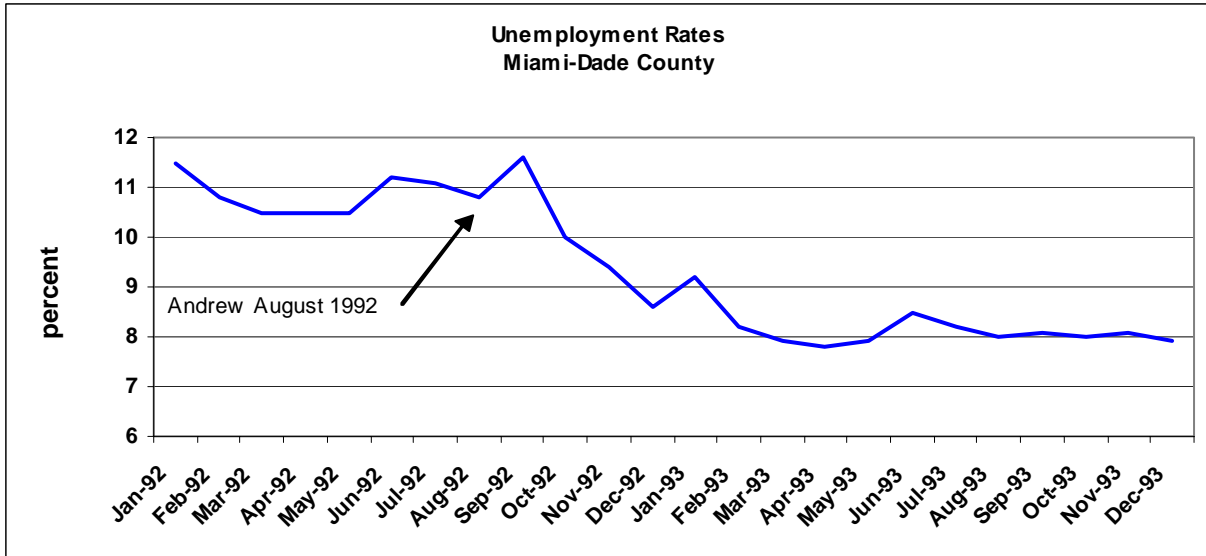
Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

Employment levels in the construction-related manufacturing industries of lumber and wood products, and stone, clay, and glass products did not benefit from the Andrew recovery. Apparently Miami-Dade imports most of its lumber and wood products. Stone, clay, and glass was recovering from the recession and did not increase from 1991-1993. Employment in utilities actually declined slightly from 1991 to 1993. Utilities did not increase since most workers restoring the power grid came from out of state and would not be counted in Florida employment figures. The same was true for insurance, most adjusters worked overtime or were sent down by their companies to conduct assessments and write checks.

By 1993 Miami-Dade County was recovering both from Andrew and the recession. The major positive impacts were noticed in construction with some temporary declines in trade and agriculture. April 1993 jobs measured 882,000 well above the pre-recession figure of 851,300 in April 1992. Construction employment increases helped lift Miami-Dade County out of the recession of the early 1990s.

Unemployment Rates Due to Andrew

Unemployment rates were already high in Miami-Dade County in late 1992 due to the recession and the additional impact of major layoffs and declines in tourism. Andrew caused the unemployment rate to increase by 0.8 percentage point to 11.6 percent in September of 1992. Rates dropped rapidly in 1993 as the local economy recovered from Andrew and the recession.



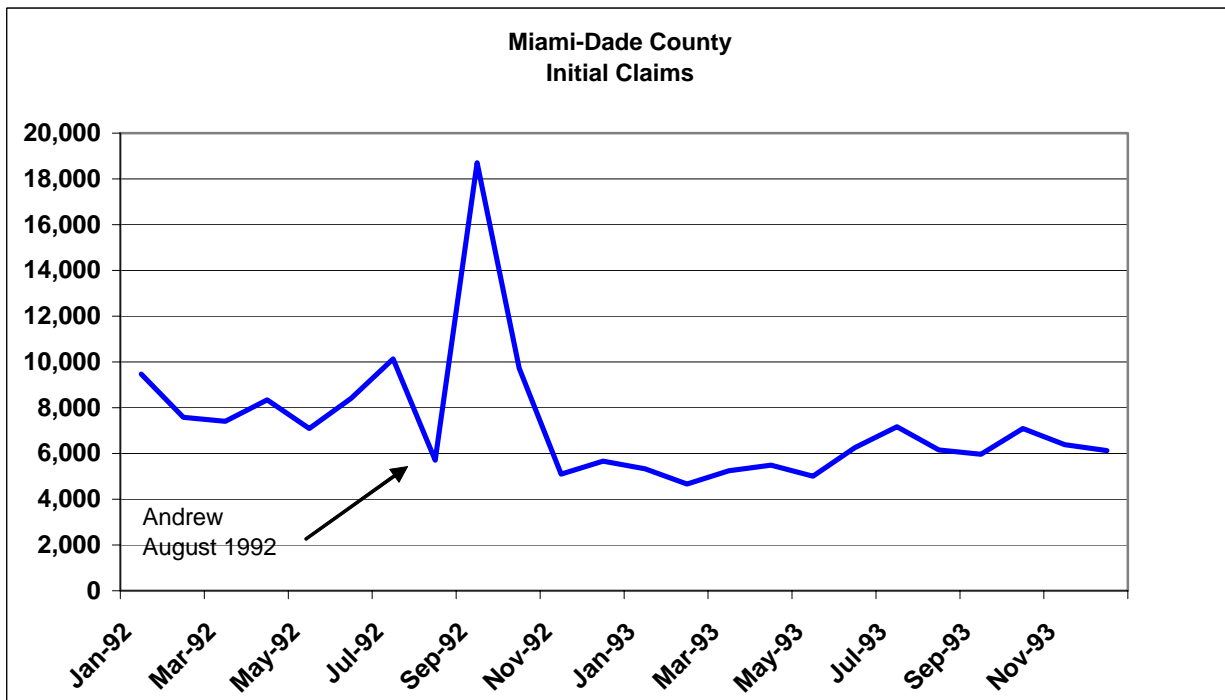
Source: Agency for Workforce Innovation, Labor Market Statistics, Local Area Unemployment Statistics.

Occupations Affected by Andrew

Building trades occupations increasing would include carpenters, roofers, heating and air conditioning mechanics, electricians, and plumbers. Many houses were totally destroyed; causing employment in special trades occupations to increase. Building supply retail outlets likewise increased, but much less than the two construction sectors. This would cause an increase in retail sales workers in hardware and building supply stores. Miami-Dade County hired clean-up workers and these would be mostly laborers.

Initial Claims Due to Andrew

Initial claims went up sharply to 18,700 in September 1992, stayed above normal levels in October and the dropped down to around 5,100 in November.



Source: Agency for Workforce Innovation, Unemployment Insurance Reports

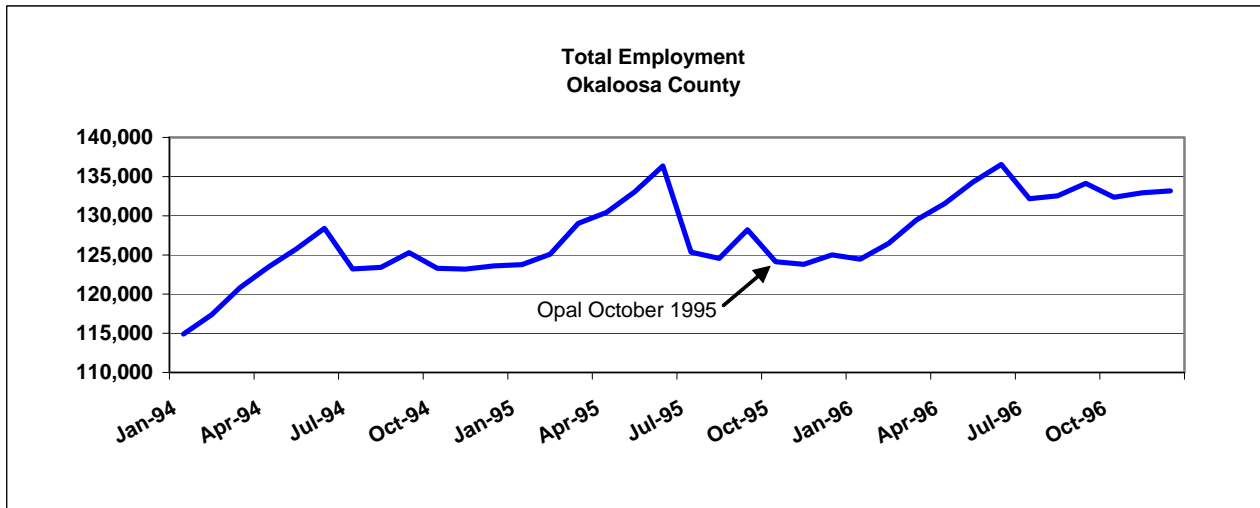
Hurricane Opal

While Andrew hit Miami-Dade County at the low point in the tourism/agriculture cycle and when employment was starting to increase, Opal hit Florida's Emerald Coast on October 4, 1995 just as the tourism season was ending and when employment figures were already declining seasonally. While the storm hit Pensacola Beach, most of the damage was to the east of landfall due to the counterclockwise rotation of hurricanes and maximum winds were measured from Destin, Florida to the east end of Choctawhatchee Bay.

Opal mirrored some of the employment changes brought on by Andrew, with most of the gains in employment levels in contract construction, with heavy construction contractors seeing less change. General building contractors and special trades contractors added the most jobs in the area (Escambia, Santa Rosa, Okaloosa, Walton, and Bay counties).

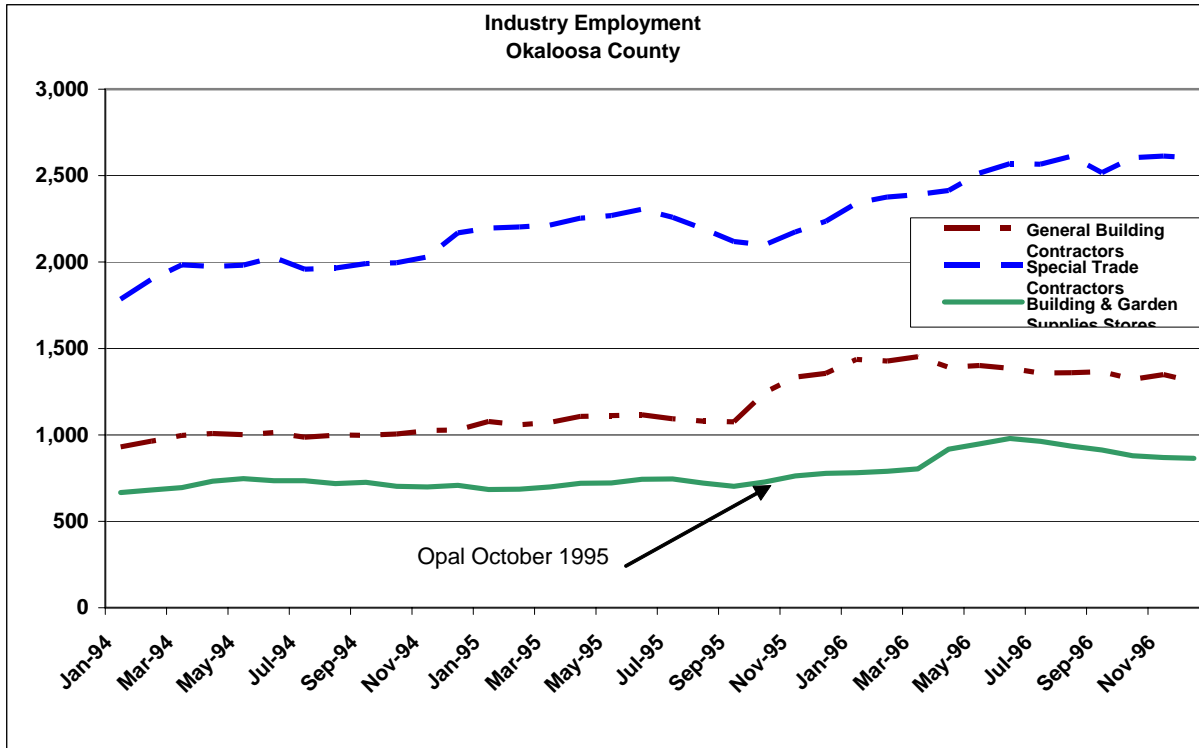
Okaloosa County

The hurricane damage in Okaloosa was mostly to residential and smaller commercial buildings. Opal had almost no impact on employment in tourism-related industries. This resulted in a very different overall impact than in Walton County.



Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

Due to the nature of damage in Okaloosa County, mostly storm surge, construction showed the most increase in employment. General building contractors had 1,100 jobs in September 1995 and peaked at 1,500 in March 1996 (+400) while special trades contractors measured 2,100 jobs in September and peaked at 2,600 in August 1996 (+500). Both industries remained well above 1995 levels throughout 1996. Part of this was due to the economic boom of the mid 1990s.



Source: Agency for Workforce Innovation, Labor Market Statistics, Quarterly Census of Employment and Wages, (ES-202)

Building supply stores added 300 jobs in Okaloosa County due to Opal and normal seasonal increases. The industry grew from 700 jobs in September 1995 to 1,000 jobs in June of 1996. Government sectors remained flat in Okaloosa except for the usual seasonal fluctuations in local government due to school district employment. There were no notable changes in employment levels for trade, services, utilities, or insurance due to Opal. The seasonal pattern of changes in tourism-related industries for 1995 remained the same as 1994 and 1996.

Walton County

The counties adjacent to Okaloosa were less impacted by Opal, but still experienced some increases in construction and declines in tourism-related industries. Walton County was in the higher wind and storm surge sector for Opal, and most of the county population is concentrated in the coastal strip.

Opal had little overall impact on total employment levels in Walton County. Opal did distort the end of the tourist season in Walton County causing a sharper drop in employment than normal, and total employment dropped by 1,000 jobs between September and October 1995. The previous year (1994) the decline was around 600 jobs between September and October and in 1996 the same monthly drop was only 220 jobs. The decline in 1995 was spread among many tourism-related industries. Both hotels and other lodging places and eating and drinking places displayed the same sharp decline after Opal, but then resumed the normal seasonal pattern. Walton County total employment resumed its usual cycle of declines in the fall and winter and increases in the spring for the rest of 1995-1996.

The post-hurricane recovery job changes were minimal in Walton County. General building contractors expanded slightly (+20 jobs) after Opal and special trades contractors added 70 jobs. Building supply retailers added 40 jobs; otherwise employment levels in Walton County were not significantly affected by storm recovery efforts.

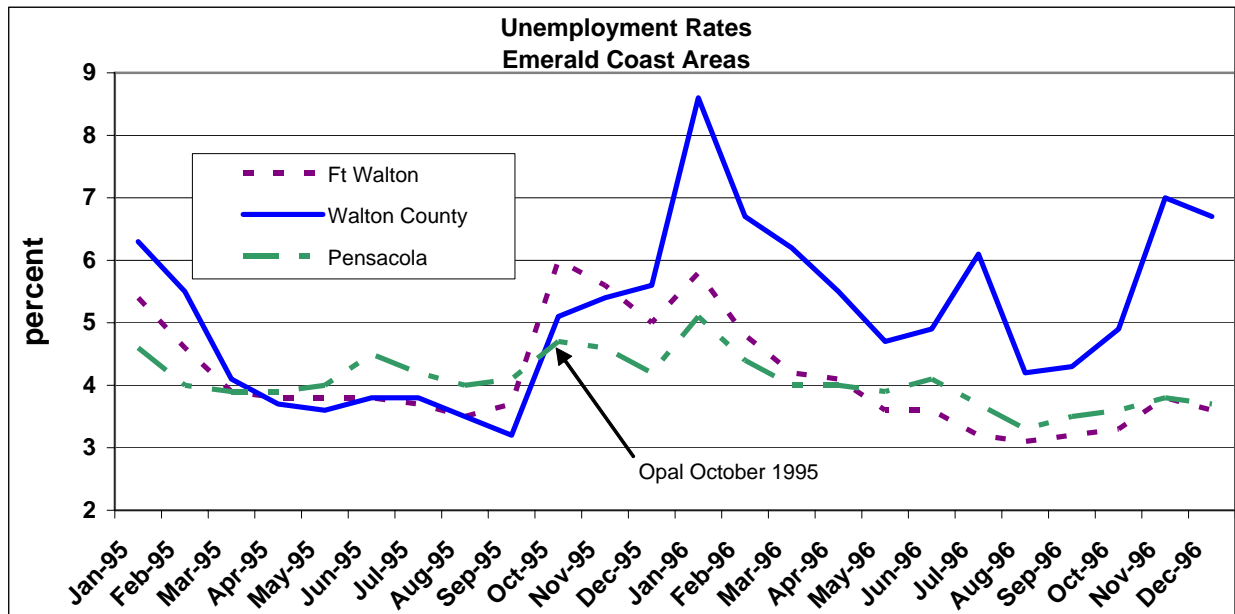
Bay County

In Bay County, there were no noticeable changes in employment that could be attributed to the storm.

Escambia and Santa Rosa counties

West of landfall, no changes were noted in employment levels due to Opal, neither Escambia nor Santa Rosa counties had any notable increases or decreases in employment in any of the analyzed industry sectors due to Opal.

Unemployment Rates Due to Opal

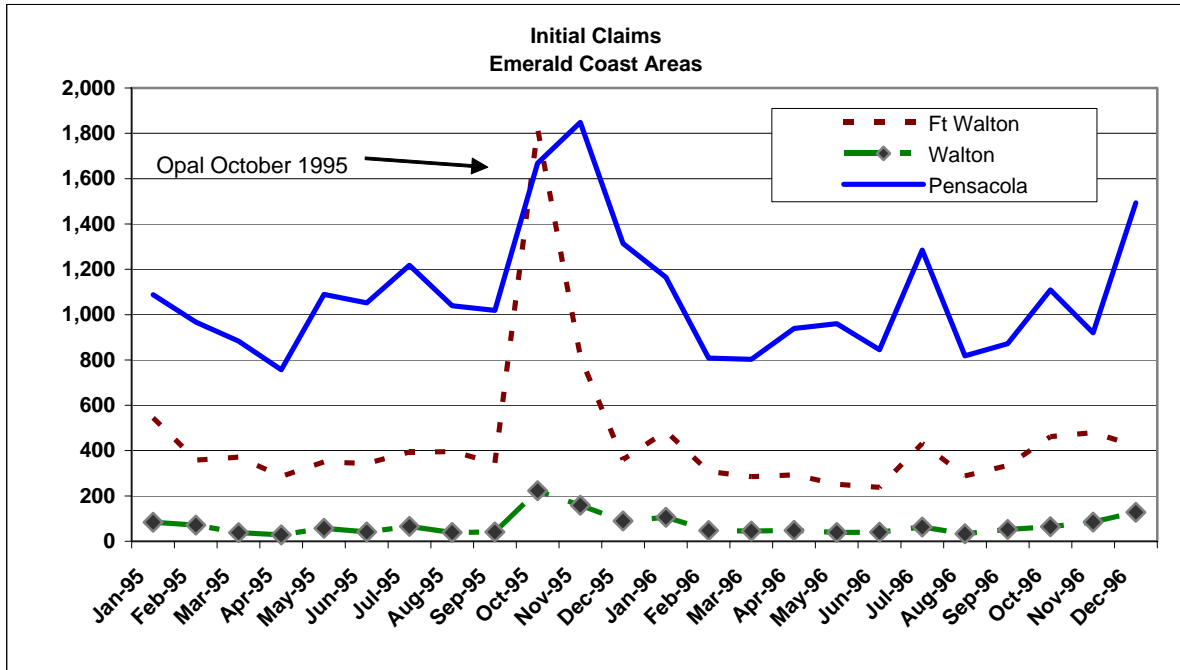


Source: Agency for Workforce Innovation, Labor Market Statistics, Local Area Unemployment Statistics.

Unemployment rates in the Fort Walton Beach Metro area, the Pensacola Metro area, and Walton County mirrored the results of the industry analysis. Both Fort Walton Beach and Walton County experienced a higher than normal increase in unemployment rates due to Opal in October to November 1995. The Pensacola Metro area had a slight increase, but immediately resumed the normal seasonal pattern.

Opal would have cause some increase for carpenters, roofers, and special trades workers such as heating and air conditioning mechanics and plumbers to rebuild houses totally destroyed by storm surge. There would have been more layoffs to tourism-related jobs after Opal, and these would have included waiters and waitresses, hotel desk clerks, bartenders, cooks, and maids and housekeepers in hotels and motels. Other layoffs due to Opal would have included amusement and recreation workers, dining room attendants, and hotel and restaurant managers.

Initial Claims Due to Opal



Source: Agency for Workforce Innovation, Unemployment Insurance Reports

Opal’s landfall in early October 1995 coincided with the normal declines in employment for Florida Emerald Coast and the consequent increases in unemployment rates and initial claims. Opal did cause claims to rise higher in 1995 than they did for the next year, and claims did show a noticeable increase in Walton County that was not present in 1996.

Conclusions

Andrew, a powerful hurricane hitting a large urban area, had much more impact on employment than did Opal, which was less powerful and hit a part of the state with much less population density. Both hurricanes caused increases mostly in construction employment, with some impacts in retail trade (building materials). Andrew caused an expansion of federal, state, and local government jobs. Opal moderately affected the end of the tourism cycle in Walton County but had little impact on Okaloosa County’s tourism employment. Opal had no significant impact on employment in counties west of the initial landfall site.