

## 2018 LGFCU Excellence in Innovation Award Project Evaluation

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| <b>Project ID</b>           | IGC-2   |
| <b>Title of Program</b>     | GIS, Emergency Management & Fire Department Collaboration Project   |
| <b>Program Category</b>     |   |
| <b>Submission Date</b>      | 5/31/2018 4:54:13 PM  |
| <b>County</b>               | Rutherford  |
| <b>Employee</b>             | Katie Doherty   |
| <b>Employee title</b>       | GIS & E911 Addressing Administrator   |
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| <b>County Department</b>    | Public Works and Planning   |
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| <b>County Manager</b>       | Steve Garrison  |
| <b>Supervisor</b>           | Danny Search  |
| <b>Implementation Date</b>  | Started Feb 2017 and continued through September 2017   |
| <b>FLSA Designation</b>     | Non-exempt  |
| <b>Project Team Members</b> | For 2017<br>Katie Doherty - GIS & E911 Addressing Administrator<br>Roger Hollifield- Fire Marshall and Emergency Management<br>Ron Morgan - Lake Lure Fire Chief<br>Frankie Hamrick - Assistant Fire Marshall<br>Daniel Elliott - Sandy Mush Fireman<br>Randy Jolly - Bostic Fire Chief<br>Chris Melton - Chimney Rock Fire Chief<br>14 other Fire Chiefs for continuation of the project |

### Description of Productivity Improvement

GIS, Emergency Management & Fire Department Collaboration Project

This intergovernmental collaboration program between the Rutherford County GIS Department, Emergency Management and all surrounding Fire Districts (volunteer and municipal) has allowed us to create and maintain countywide emergency response layers such as, hydrant locations, helicopter landing zone locations and fire district water points, that can be used by E911 dispatchers and any other emergency responder with access to mobile mapping. At the end of each district project the fire department receives accurate and organized data along with professional maps and map books

covering their service district. The final analysis and information created can be used for Insurance Service Office (ISO) inspections that can result in better insurance ratings for the department and its service area. When the fire rating is improved, the public could possibly receive lower premiums on their homeowners insurance. The State Fire Marshalls office now requires what we created as a standard across NC for fire rating inspections.

### **Description of why this project was initiated**

This project initiated from a request made by E911 dispatch and emergency responders wanting more GIS data layers, on a countywide scale, that could be useful for responding to E911 calls. We initially requested data from various utility companies only to find the information received to be “hit or miss”. Based on the data needed, it was determined that fire departments are the best available source since they are required to maintain that information by the state. However, most districts only had hand drawn lists or digital spreadsheets. After attending a yearly fire chiefs meeting the issue was discussed and a bargain was struck. All fire districts, volunteer and municipal, would work with GIS and Emergency Management to GPS and digitize all data in their service area. In return they would receive large detailed maps, map books and spatial analysis that could be beneficial for state fire insurance rating inspections. Using the received utility data as a base the project commenced. In 2017 four fire districts used the final analysis for their scheduled inspection and were able to lower their fire insurance rating. The districts were; Lake Lure, Chimney Rock, Sandy Mush and Bostic. As an additional benefit, some citizens received lower their premiums on homeowners insurance. The final data analysis included:

- Total square miles of area in the service district broken down by 1.5, 2.5, 3, 4, and 5 miles away from each fire station (these increments are used by the state)
- Total population in the service district
- Total address points in the district (residential vs. commercial)
- Total road miles in the service area broken down by 1.5, 2.5, 3, 4, and 5 miles away from each fire station
- All hydrant locations color coded by water pressure
- All road miles located within 1000ft from a hydrant
- All helicopter landing locations displaying latitude-longitude coordinates
- All water points used in rural service areas with low number of hydrants

### **Quantifiable results (sustainability, cost savings, cost avoidance and/or a higher level of service).**

#### **Indication of what resources were used and what was done with any accrued time savings**

All staff and equipment necessary for the project was already available in the county's GIS department. The only expenses were labor hours along with printing and plotter supplies. This included ink, print heads, plotter paper and various office supplies. One round of ink and plotter paper can total about one thousand dollars.

Estimates received from a local insurance company, showed an estimated yearly savings in homeowner's premiums for an average home in Lake Lure to be 27%. This was due to their insurance rating changing from a 6/9 to a 4. Sandy Mush also showed a 27% yearly savings on an average home

from their rating changing from a 6/9 to a 5. Average home values in each area are different so the estimated yearly savings ranged from \$234 to \$438.

The sustainability for the project is to continue until all eighteen fire departments have been completed and create a 4-5 year cycle for all departments for the future. This cycle will create the updates needed for the new GIS layers created and used by E911 dispatch and all emergency responders.

### **Other descriptive information**

After surveying the completed fire districts about the project deliverables, some of the benefits mentioned were:

- Increased productivity and availability of information
- Better identification and location system
- Faster annual maintenance
- More accuracy in information
- Better use of previously unused equipment (such as tablets) due to lack of available data
- Possible new response software now that data is available to use
- Better resource determinations