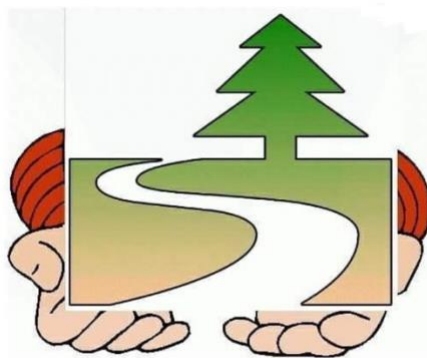




# **Uwharrie National Forest Trail System Project**

**Interpretative Trail System  
&  
Interactive Map Application**



**Our lands; in our hands!**



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## UNFTS ITS/IMA PROJECT SUMMARY

An educational project has been started to turn the Uwharrie National Forest Trail System (UNFTS) into an *Interpretative Trail System*<sup>1</sup> (ITS), where important key areas along the trails are identified by local experts and then identified with signage along the trail and highlighted on an *Interactive Map Application* (IMA). This will be the first of its kind in the nation.

You ask: What is an Interpretative Trail System? *An ITS is where any user of the IMA could use a smartphone or tablet to navigate through the trail system using just GPS. A cell network connection is not required.*

A few of the typical ITS/IMA Functions could be;

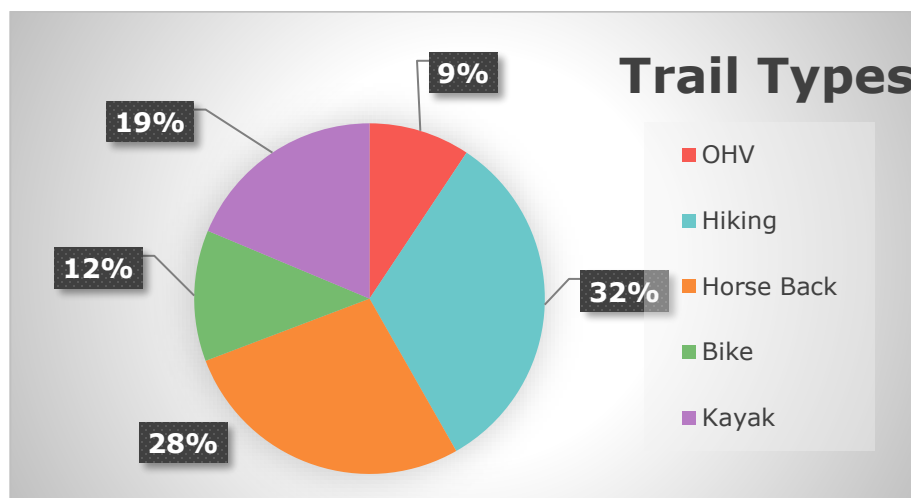
- *The user's actual location will be indicated by a symbol on the digital map.*
- *When the user approaches one of the designated important key areas they would be notified automatically with a description of the key area and other important information.*
- *Another function of the ITA may be to notify the user if they deviate from the designated trail system.*
- *If a safety hazard is found along the trail a notification/message can be initiated by the user to be sent when a network connection is established to a designated responder, like the Forest Ranger, or Law Enforcement.*

The Uwharrie National Forest Trail System (UNFTS) was selected to be used as the pilot for this new ITS concept because of its diverse usage. The UNFTS sees 2500+ OHV visitors annually. In addition to the 2500+ OHV enthusiasts there are tens of thousands of hikers, equestrians, mountain bikers and kayakers that use the 173 miles of trails in the UNFTS. The trails are broken down like this;

- *OHV – 17 miles*
- *Hiking – 50 miles*
- *Horseback – 50 miles*
- *Mountain Bike – 22 miles*
- *Kayak – 34 miles*

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<sup>1</sup> An **Interpretative Trail System** will highlight areas that are important as a historic artifact rich area or an area where the environment is very sensitive or an area that has a special scenic appeal to the user.



The UNF Interpretative Trail System project is being sponsored by organizations like Tread Lightly!, 4 Wheel Parts, Carolina Trail Blazers, Carolina Jeep Beach Go Topless Day and the National Forest Service. To date each sponsor has donated in their own way to creating the Interpretative Trails in the Uwharrie National Forest.

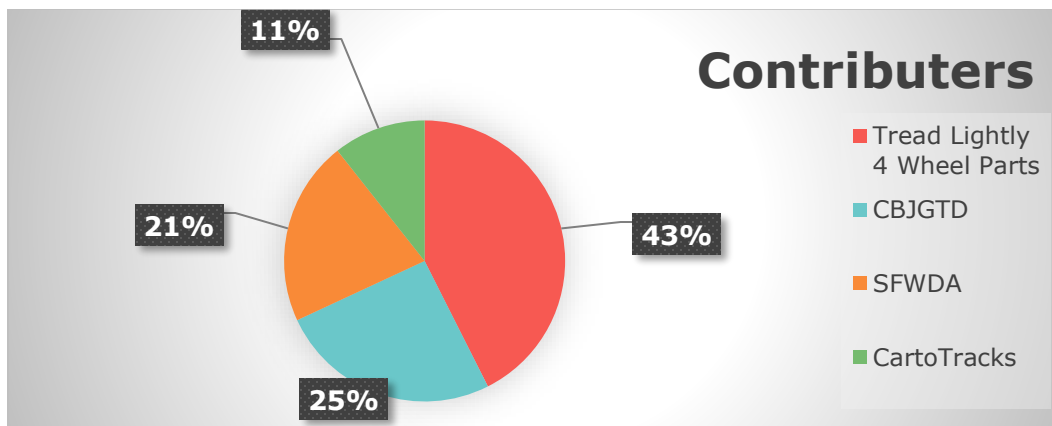
*This project showcases how the OHV community contributes positively. By supporting the mapping portion of this project, the OHV community illustrates to the overall outdoor recreation community and the National Forest Service that we are dedicated to promoting responsible use of the trail system by all.*



## Project Elements

- 1. Interpretative Trail System – Key Area Identification and Signage (Underway)**
  - *Tread Lightly! and Four Wheel Parts are providing up to \$10,000.00 and stewardship expertise to develop signs.*
  - *Uwharrie Off Road Training Center and Carolina Trail Blazers are providing the labor to develop and install signage.*
- 2. UNFTS Mapping – Collect data and create the dynamic map of the UNFTS.**
  - *CartoTracks will collect the data to build the maps at a discounted rate valued at \$2,500.00*
  - *CBJGTD will fund (\$5,954.00) of this element*
  - *SFWDA will fund (\$5,000.00) of this element*
  - *Carolina Trail Blazers labor valued at \$2500.00*
- 3. Interpretative Map Application – Develop a smart phone application that uses ‘geo-fencing’<sup>2</sup> technology to enable the automated functions to be first used for the UNFTS. (Planning Phase – unfunded at this time)**

Overall project funding is being shared with



<sup>2</sup> A geo-fence is a virtual perimeter for a real-world geographic area.[1] A geo-fence could be dynamically generated—as in a radius around a store or point location, or a geo-fence can be a predefined set of boundaries, like school attendance zones or neighborhood boundaries.



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## SFWDA Grant Request Justification

**Deliverables:** CartoTracks will generate a master *printable UHNFTS map* file to be used to print paper maps. The paper maps *may* be sold at the 5 retailers and the District Ranger's Office that presently sell the Uwharrie –USFS Trail Passes. 100% of the profits from printed maps will go back to CBJGTD and SFWDA. *No funds have been allocated to actually print the map.* The *digital ITS map* will be sold by CartoTracks on line.

SFWDA active members will receive 15% discount on the purchase of the digital Uwharrie Map(s).

The negotiated fixed price for CartoTracks to map the UNFTS by May 31, 2018 is \$10,954.00.

The OHV community will contribute to the UNFTS project by funding the development of the digital maps of the UNFTS. Carolina Beach Jeep Go Topless Day<sup>3</sup> (CBJGTD) will contribute \$5,954.00 and Southern Four Wheel Drive Association (SFWDA) will contribute \$5,000.00 to fund this part of the overall project.

## Value to OHV Community

CartoTracks will return 20% of the sales of Digital Maps back to us. By including all of the Outdoor Recreation Community we could realize a full RIO in less than a year. 25,000 bought OHV trail passes in 2016. It is reasonable to assume 30% may purchase a digital map.

Potential Return on Investment scenario-

Digital Map:

- *Digital Map Cost = \$10.00 each*
- *20% returned to OHV community = \$2.00 for each map sold*
- *Potential sales = 30% of annual visitors ... 25,000 x 30% = 7,500*
- *7,500 X \$2.00 = \$15,000.00 ROI the first year*

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<sup>3</sup> **CBJGTD** - founded in 2012 and has grown to host over 600 Jeeps in 2017 and donating a total of \$32k back to the community.



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Printed Map: 100% returned to OHV community after printing cost.

### Schedule:

- Project approval (SFWDA): December 2017
- Trail mapping (CartoTracks): December 2017 – Feb 28, 2018
- Map creation (CartoTracks): March 1 – March 21, 2018
- Printable map review by Uwharrie: March 22 – March 29, 2018
- Map Validation by Uwharrie and CartoTracks: March 30 – April 30, 2018
- Final Map Changes (CartoTracks): May 1 – May 8, 2018
- Final Map Approval by Uwharrie: May 9 – May 16, 2018
- Publish Map – May 17 – May 31, 2018

### Cost Breakdown:

1. Digital Maps (CartoTracks)
  - a. Map Creation and Publishing - \$10,954.00  
(CartoTracks)
2. Volunteer Labor (estimated):
  - a. Carolina Trail Blazers – 60 hours (UNF SME)
  - b. Uwharrie Off Road Training Center – 60 hours (UNF SME)
  - c. SFWDA – 40 hours (oversight)



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## TALKING POINTS:

1. Explain why we need another map when there are many maps already available. Du
  - 1.1. There are no digital maps presently available that provide accurate real-time locator information
  - 1.2. *CartoTracks maps were generated for the 2017 36 Hours of Uwharrie event. It is not an all-inclusive OHV map.*
  - 1.3. Technology has become the norm in families where simple map reading has taken the backseat to smartphones doing the navigation for us. Providing a tool for generations to come will provide to be fruitful not only for OHV users but other hobbyists covered above.
  - 1.4. Moving the mapping from a paper form to a digital form not only provides the users to digitally track their trip routes but also allows them to provide real time updates to personal such as rescuers if something was to happen.
    - 1.4.1. Example A:

A buggy user traveling on a new trail system slides off a bank and totals their rig. He calls rescue for a hurt passenger and when requested to provide his exact location, his response is typically “I crossed a ridge at some point that crosses a river...”
    - Example B:

A buggy user traveling on a new trail system slides off a bank and totals their rig. He calls rescue for a hurt passenger and when requested to provide his exact location, he is able to identify himself on the map simply by map markers that don’t exist in front of him on a tree, but they were placed within the map to cut down on metal that gets ripped off trees, shot with handguns, or rusted or decayed over time. This provides not only the user a real value but the rescuer that needs an exact location. This is simply something that paper maps can not do.
2. Explain why we are paying to map the OHV Trails by CartoTracks when CartoTracks already has those trails mapped and available.
  - 2.1. CartoTracks limited OHV maps were generated for the 2017 36 Hours of Uwharrie event. It is not an all-inclusive map.



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- 2.2. Because these maps will change over time with additional details that contributors find helpful such as:
    - Bathrooms
    - Trails
    - Location markers
    - Event information
    - Vendor locations
    - Closed trail details
  - 2.3. Trail systems will continually evolve as needs exist. These maps will need revisions that users will find beneficial to their needs. With that will come additional benefits to SFWDA. You can reassure that most users that access and utilize these maps will buy updated versions when needed. This will produce repeat revenue generated by the sales of updated maps once their 1 year free update passes.
  3. Explain why the OHV community, SFWDA and CBJGTD, should pay 100% of the cost for mapping. Why are we not getting financial support from FOU.

Note: FOU is perceived to represent all users of the Forest Trail System. I think their primary focus is OHV based on their Facebook page.

    - This is an effort that needs people to see the vision in hopes that others can see the value add it brings to all users from other organizations that may not quite understand the vision. This can help establish or re-establish a relationship with other organizations that may not understand what we represent in the OHV community. This would hopefully encourage open discussions in how we can work together protecting what matters most to us, our environment.
  4. Why do we pay for map creation and CartoTracks then sells the maps?
    - 4.1. The up front grant money pays for collecting of the data to create the maps.
    - 4.2. Map sales goes to hosting the map on a server for delivery to customers over time.
    - 4.3. This is no different than paying to build a pavilion at a private Off Road Park or paying to restore a trail.
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- 4.4. The cost incurred by CartoTracks to host the maps on line is not charged back to us. It is covered by the subscription cost and sponsors for the system.
  - 4.5. 20% of the cost of the digital maps and 100% of paper map profit will come back to the OHV community to allow us to continue to provide grants that support the outdoor recreation community. *Note: Actual Printing of Off Road Maps is not included in the cost of this project.*
  - 4.6. It is possible we will see a 100% return on our investment in less than 24 months.
  - 4.7. CartoTracks has the experience and resources to manage the project which should be taken advantage of. The costs associated to creating a system to manage purchases and delivery of goods through vastly changing technology proves to show the value of allowing a company who has the experience and ability to manage such efforts do so. Putting a process/system in place that remotely works as well as CartoTracks would be extremely time consuming and require dedicated paid resources to manage the day to day process to ensure that the full potential of the investment is being met and the customer experience is not neglected.