

A satellite-style map of a coastal region, likely the Pacific Northwest, showing a mix of brown and tan landmasses and blue-green water. A semi-transparent grey rectangular box is centered over the map, containing text. The text is in a bold, black, sans-serif font. Below the text is a solid black horizontal line.

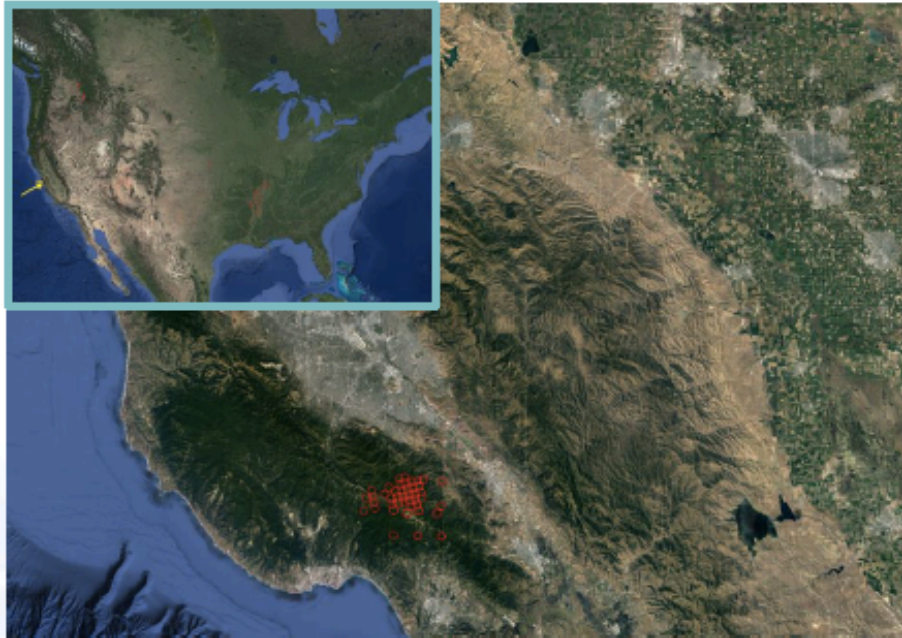
Burn Severity Mapping Tool
(Cindy Schmidt for Josh Picotte)

Utilization of Multi-Sensor Active Fire Detections to Map Fires in the US

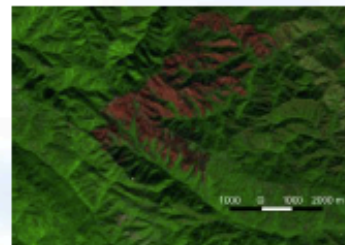
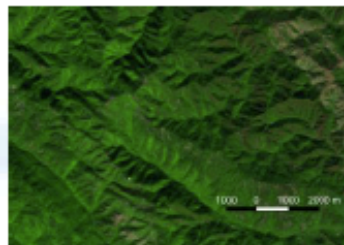


- Project PI: Joshua Picotte (*Stephen Howard – retired*)
- Development Team: Michelle Anthony, Cheryl Holen, and Karthik Vanumamalai
- Partners: USDA Forest Service Forest of Florida, LANDFIRE, MTBS, St. John's Water Management District, and USGS EROS
- Project Summary:
 - Developed open source tools to incorporate Landsat imagery and fire detections to map fire perimeters and burn severity
 - Enables any user any where in the world to quickly assess fires in their area of interest
- Earth Observations applied: AVHRR, GOES, Landsat, MODIS, and VIIRS

Biggest Achievement or Advancement to Date



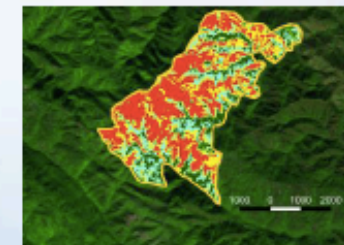
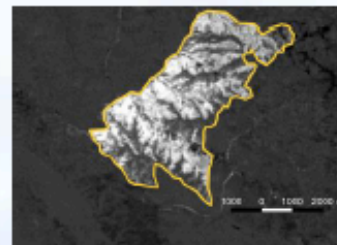
Step 1: Identify a fire using sensor detections or another data source



Step 3: Identify pre- (left) and post- (right) fire Landsat Scenes

| ID | Program | Assessment Type | Pre-fire Scene | Post-fire Scene | Post-fire Scene | Mapper | Date Created |
|----|---------|-----------------|----------------|-----------------|-----------------|--------|------------------------|
| 1 | NTSS | Initial | 00403420E504 | 00403420E507 | None | gloche | 2018-01-05 11:08:24.81 |

Step 2: Use QGIS tool to enter fire information and order imagery



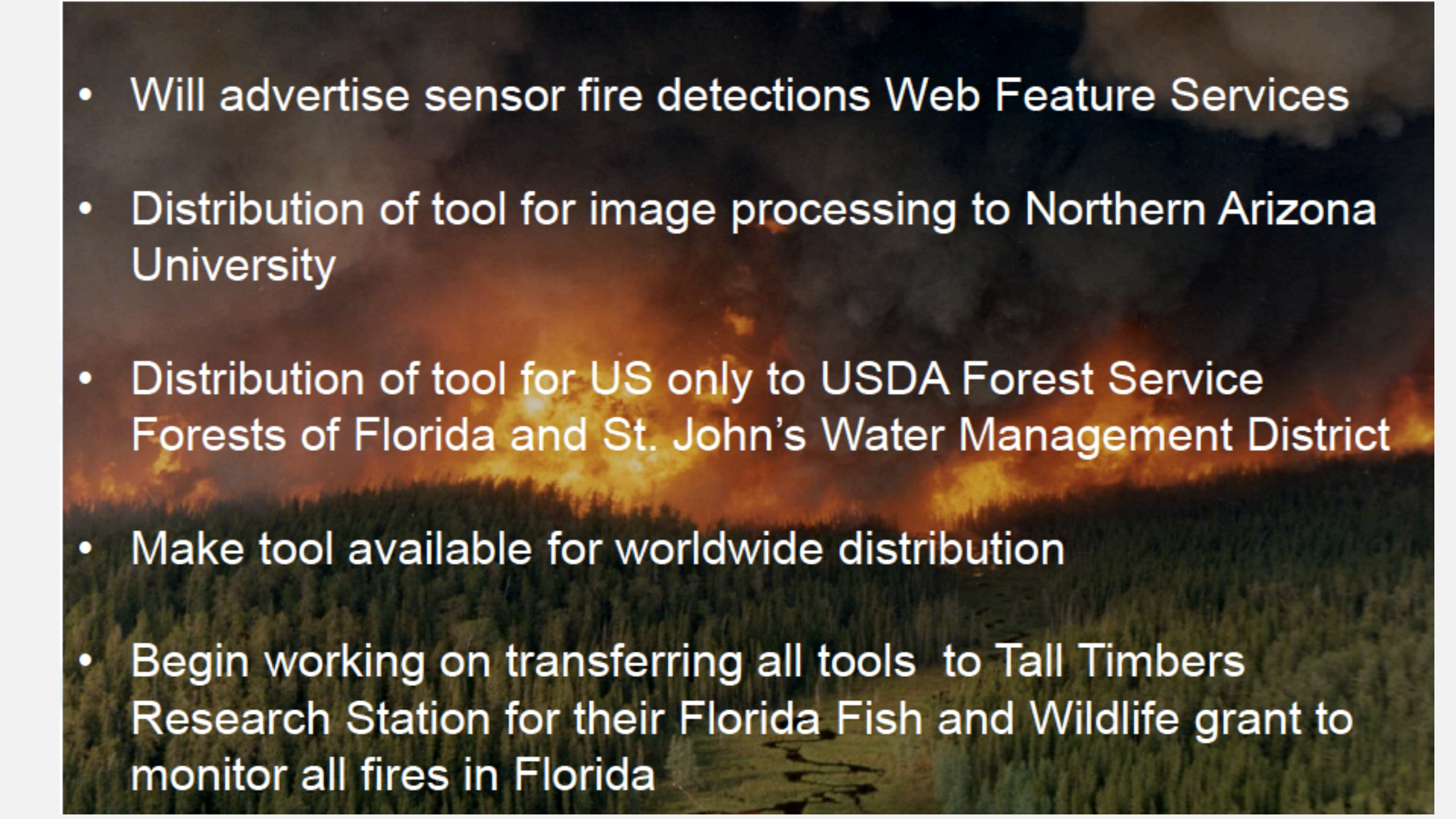
Step 4: Map fire perimeter and burn severity

Project End Goals

- Testing of tools by collaborators
- Fix any potential problems
- Worldwide distribution

Remaining Steps

- Enable UTM worldwide projections
- Enable tool to work with changes in Landsat naming convention
- Sensor detections Web Feature Services deployment
- Completion of documentation

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- An aerial photograph of a forest fire. The foreground shows a dense green forest with a winding river. The middle ground is dominated by a large, intense fire with bright orange and yellow flames rising into the air. The background shows a dark, smoky sky with some lighter clouds, suggesting a sunset or sunrise.
- Will advertise sensor fire detections Web Feature Services
 - Distribution of tool for image processing to Northern Arizona University
 - Distribution of tool for US only to USDA Forest Service Forests of Florida and St. John's Water Management District
 - Make tool available for worldwide distribution
 - Begin working on transferring all tools to Tall Timbers Research Station for their Florida Fish and Wildlife grant to monitor all fires in Florida