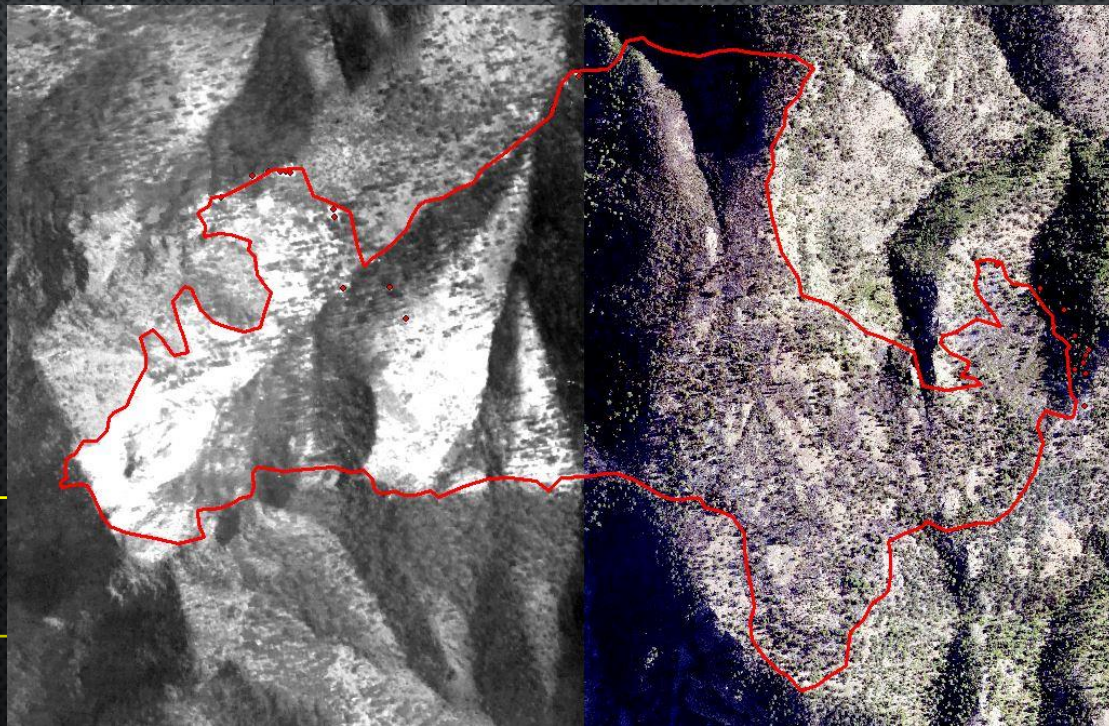


MANIPULATING IMAGERY IN ARC



OBJECTIVES

Demonstrate a few ways to manipulate imagery in ArcMap to bring out details for mapping

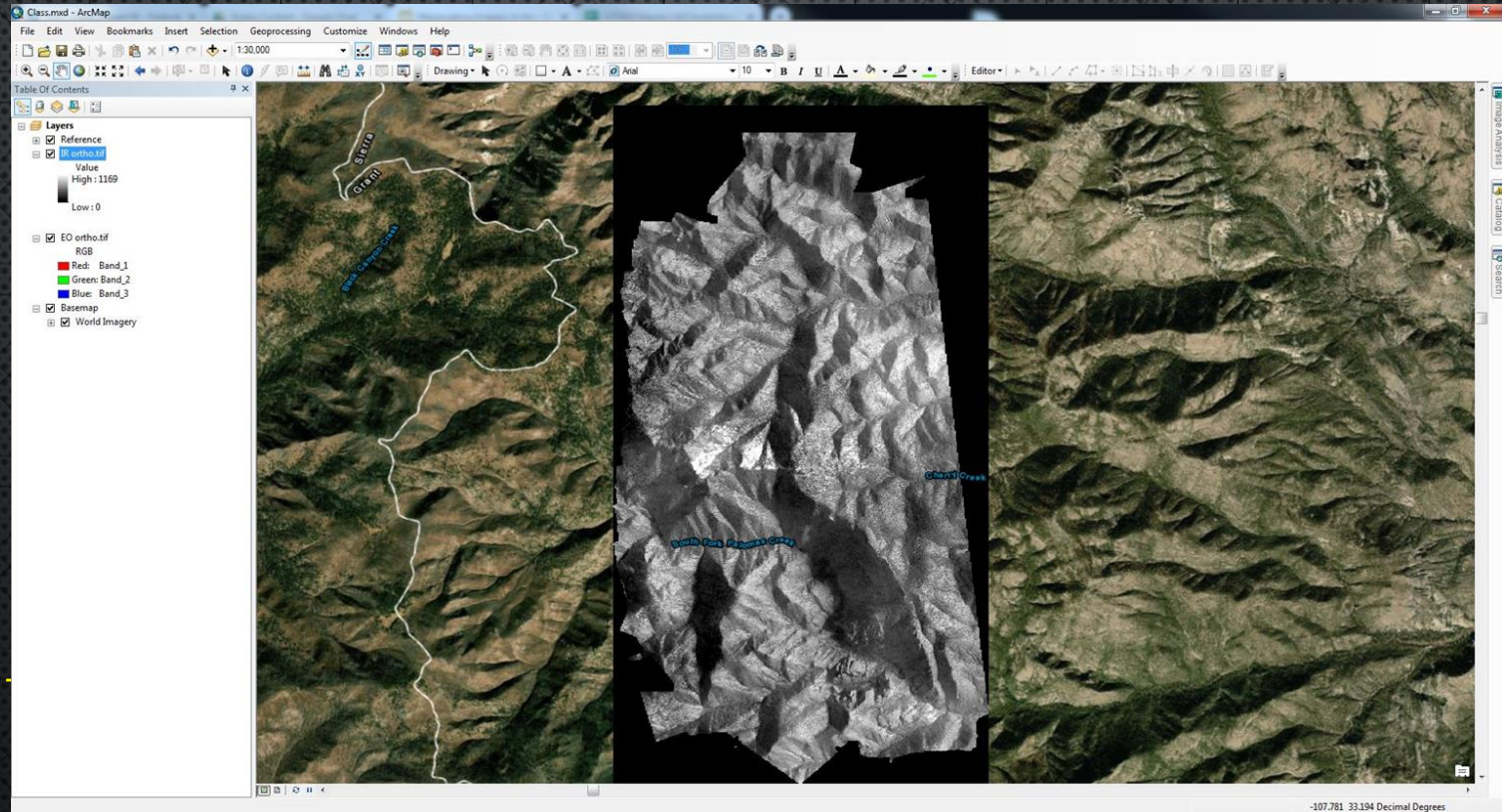
RGB IMAGERY

The RGB ortho imagery can help in identifying the fire area and showing areas that are burned but cold.

IR IMAGERY

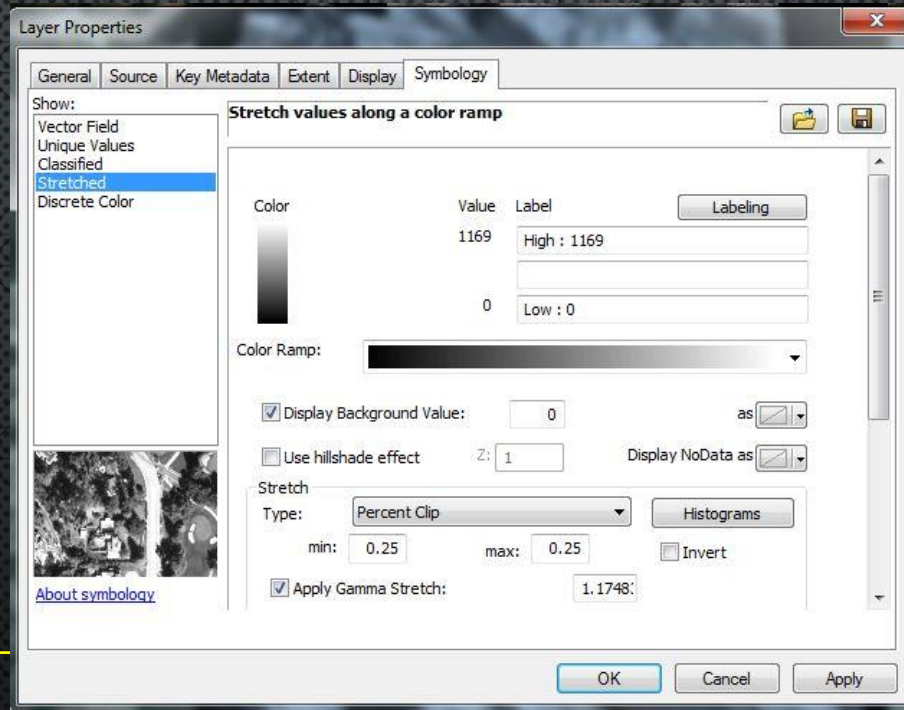
The thermal TIFF ortho from Metashape contains a large amount of data and information within the file. Each pixel has thermal value embedded which can be helpful in interpreting what is fire and what is not. Using the thermal with the RGB the UASD can reasonably interpret the edge of the fire as well show where the heat is on the incident.

SETUP



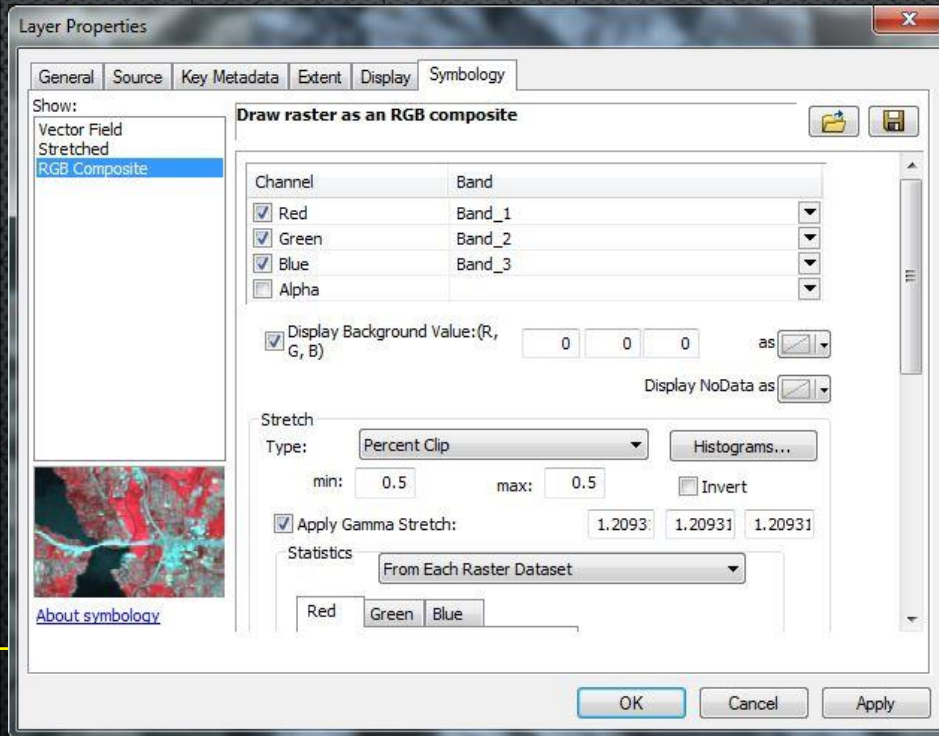
Drop both ortho images into Arc and load a basemap of imagery.

SETUP



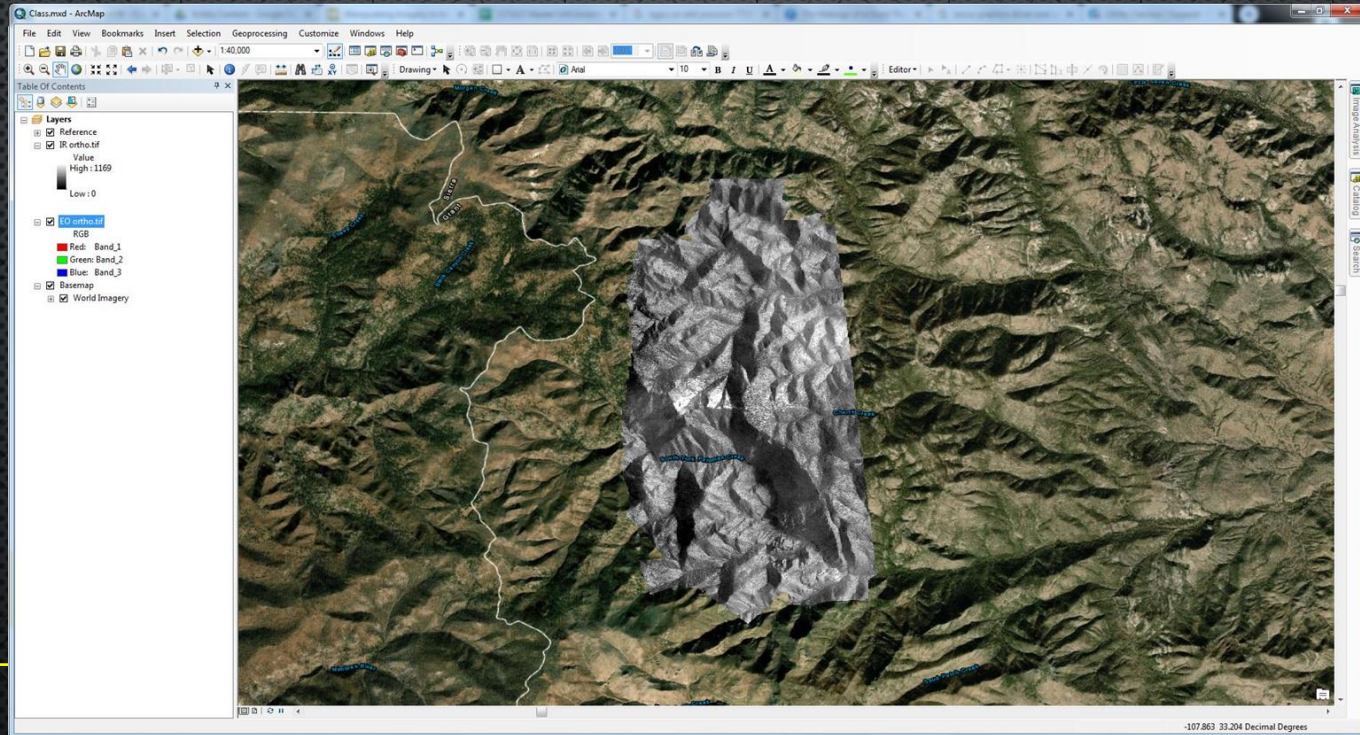
Properties for IR Ortho. Check box for Display Background Value and set to 0. Apply.

SETUP



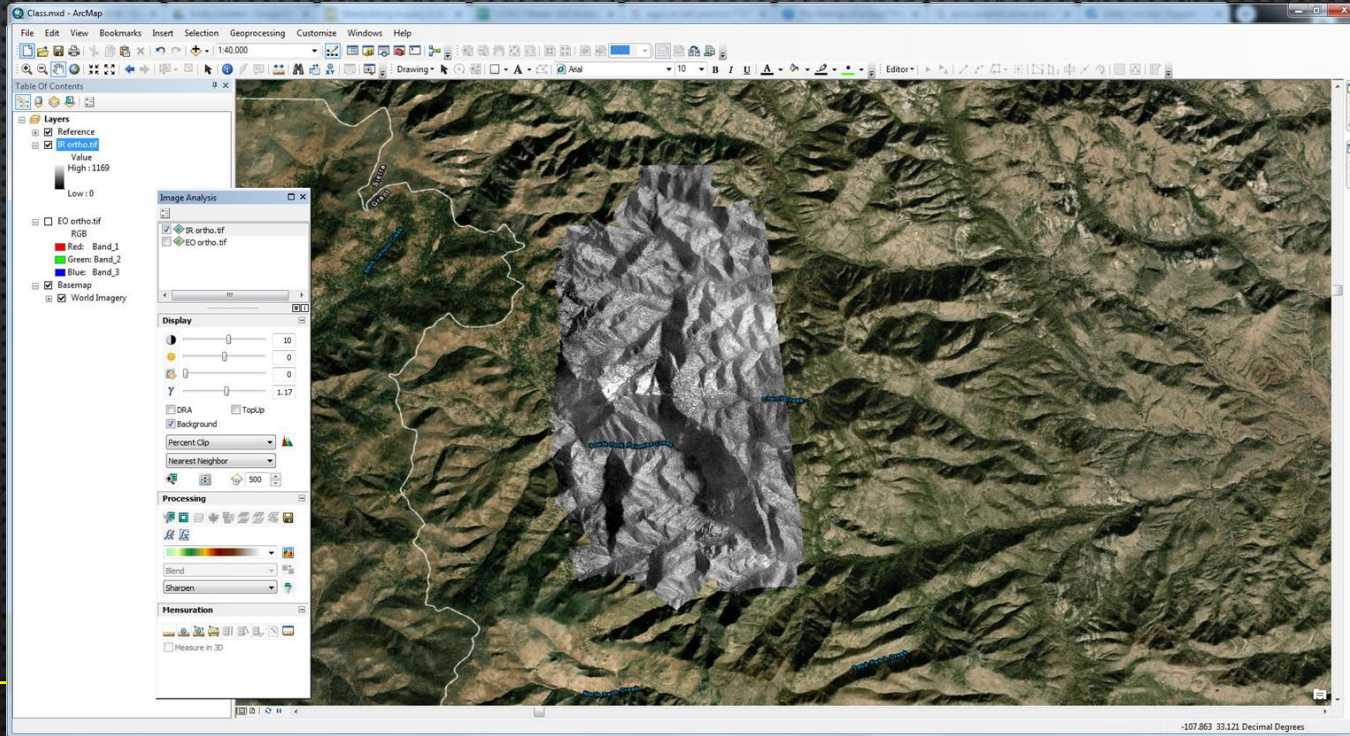
Properties for RGB Ortho. Check box for Display Background Value and set all to 0. Apply.

SETUP



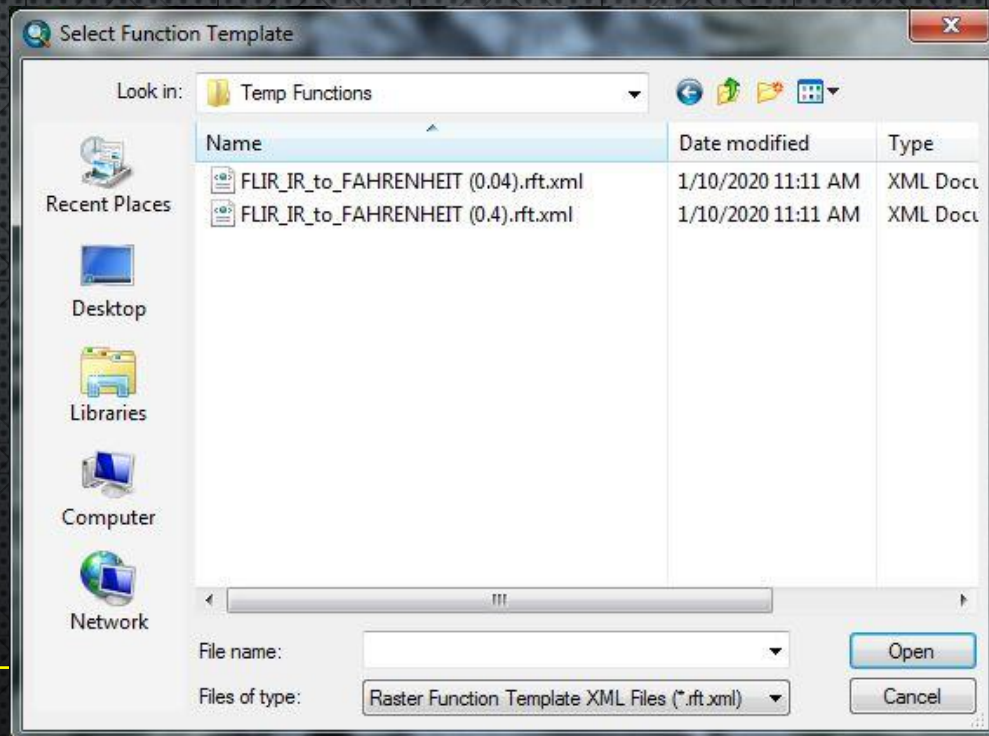
Note the black borders are now all transparent.

SETUP



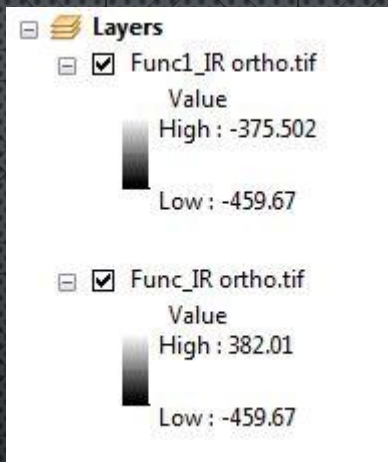
Open Image Analysis from Windows Tab.

TEMP CONVERSION



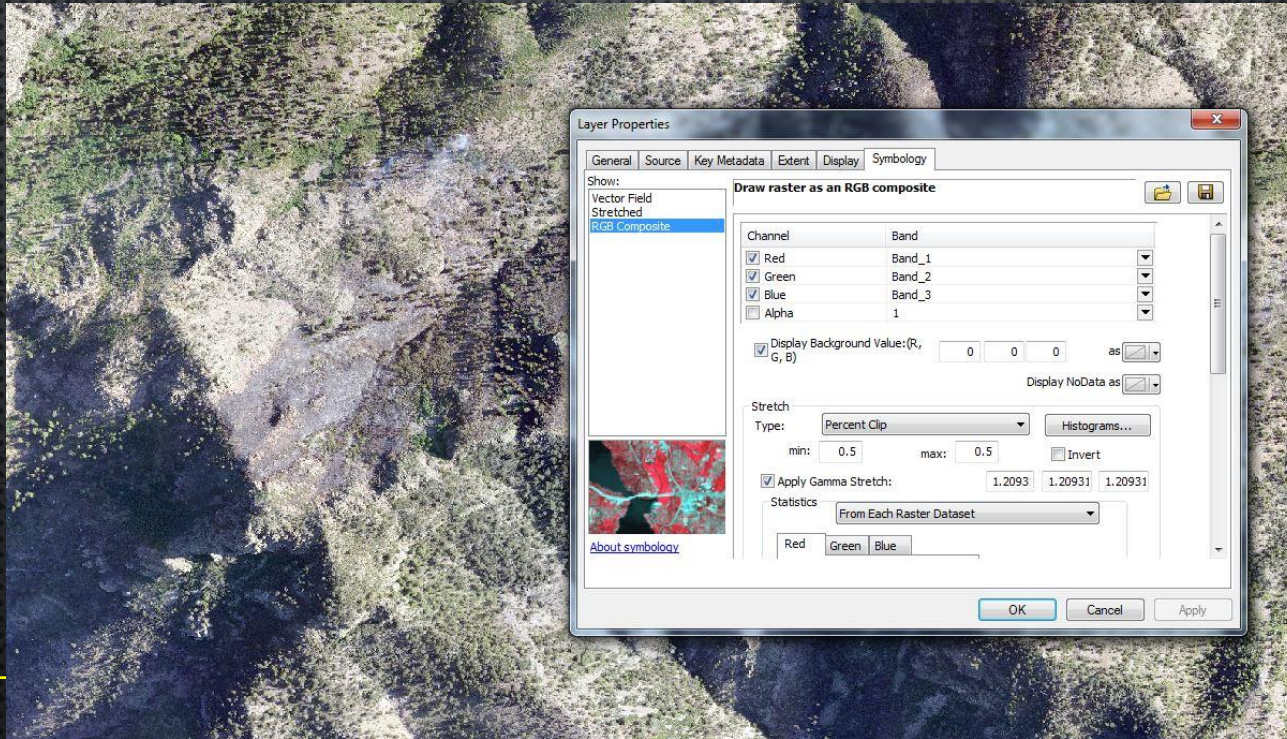
Depending on the data set one of these 2 Function Templates will work, run both.

TEMP CONVERSION



The Func that has a range above and below 0 is the correct one, delete the other. The function converts the Kelvin temperature values in the pixels to Fahrenheit. Once completed you can left click and Identify to get the temperature properties of pixels. If camera was setup correctly these should be fairly accurate.

SETUP



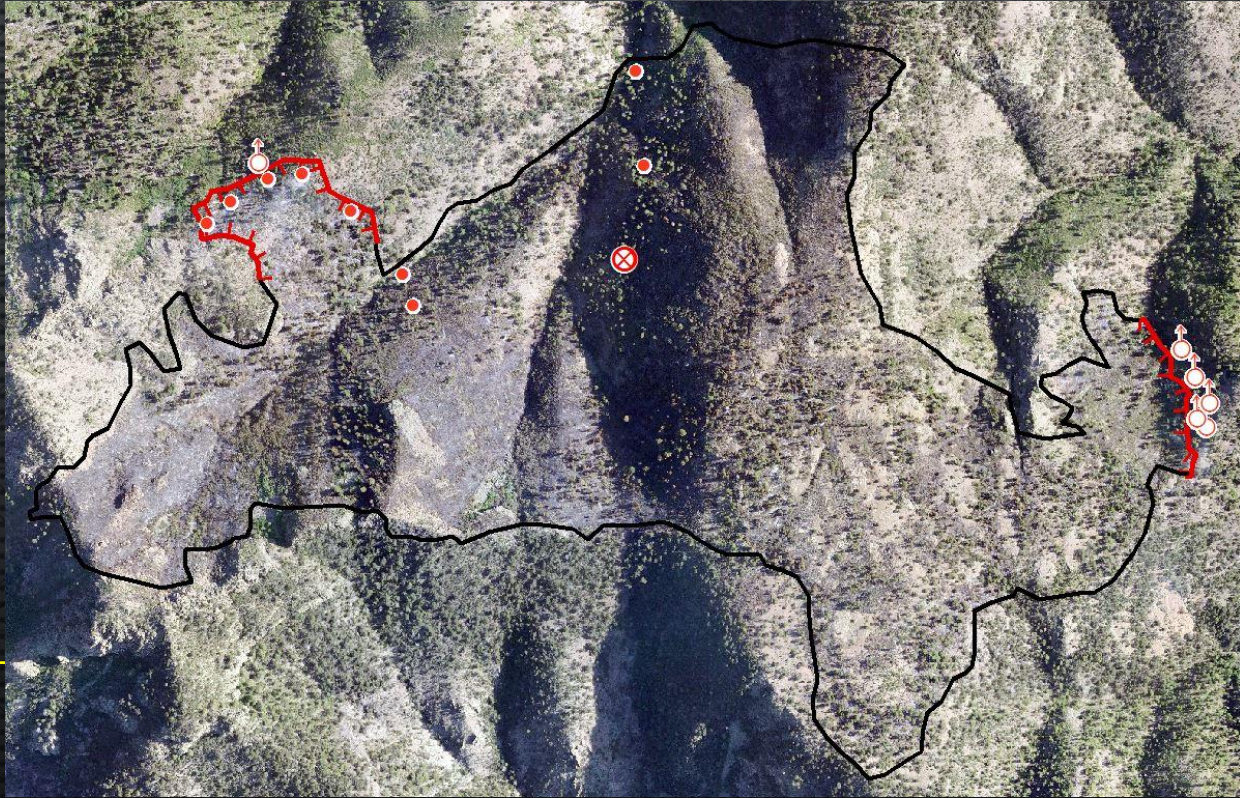
Looking at the properties of the RGB ortho and the

RGB MANIPULATION



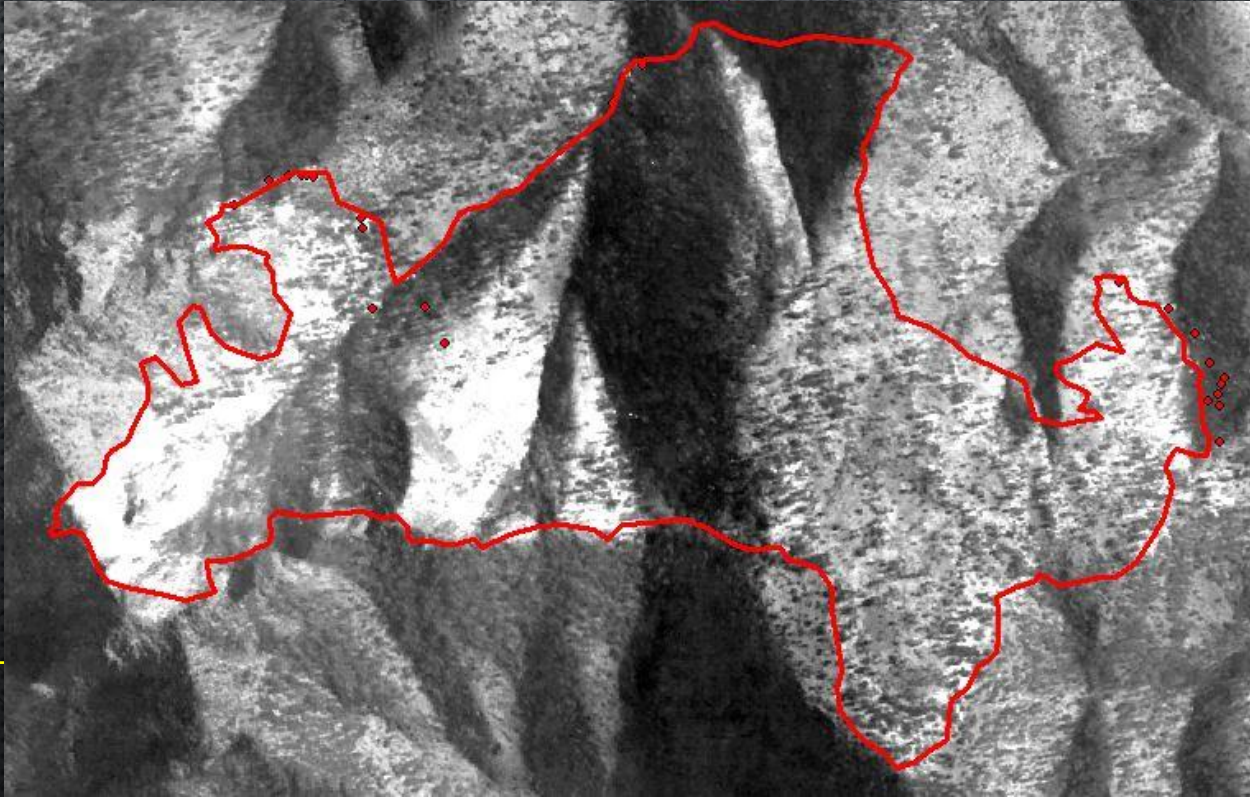
Note the burned area within the sunny vs shaded areas. Use Image Analysis to adjust colors to lighten the shaded areas. This can help in finding the fire edge for mapping.

MAPPING



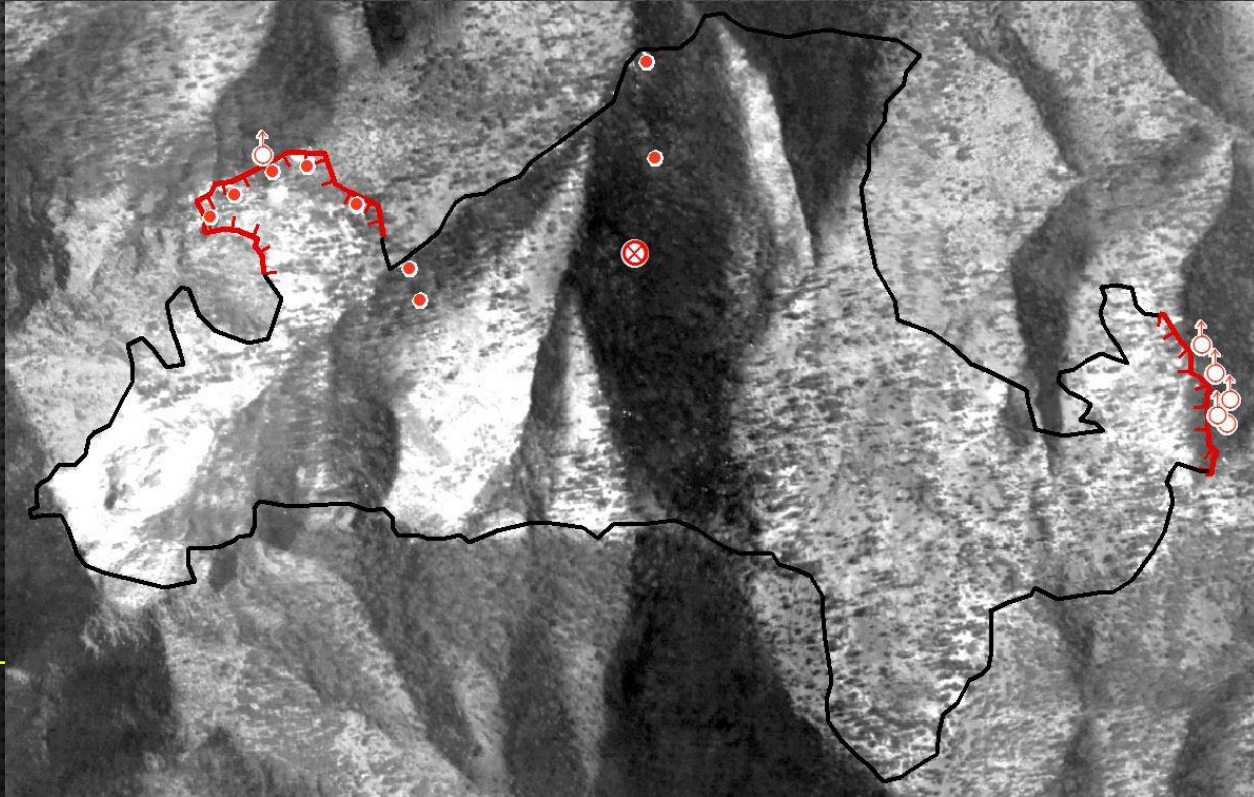
Same fire line from the IRIN with GSTOP tools traced with RGB ortho.

MAPPING



Use the appropriate tool set to map the incident. This example uses the IRIN tools.

MAPPING



Same fire line from the IRIN with GSTOP tools traced with IR ortho.

MANIPULATING IMAGERY IN ARC

These are a few ideas that will help the UASD in interpreting imagery and generating map products for incidents.
As new lessons are learned this presentation will be updated.
