

The Final Phase of Aerial Photo Collection

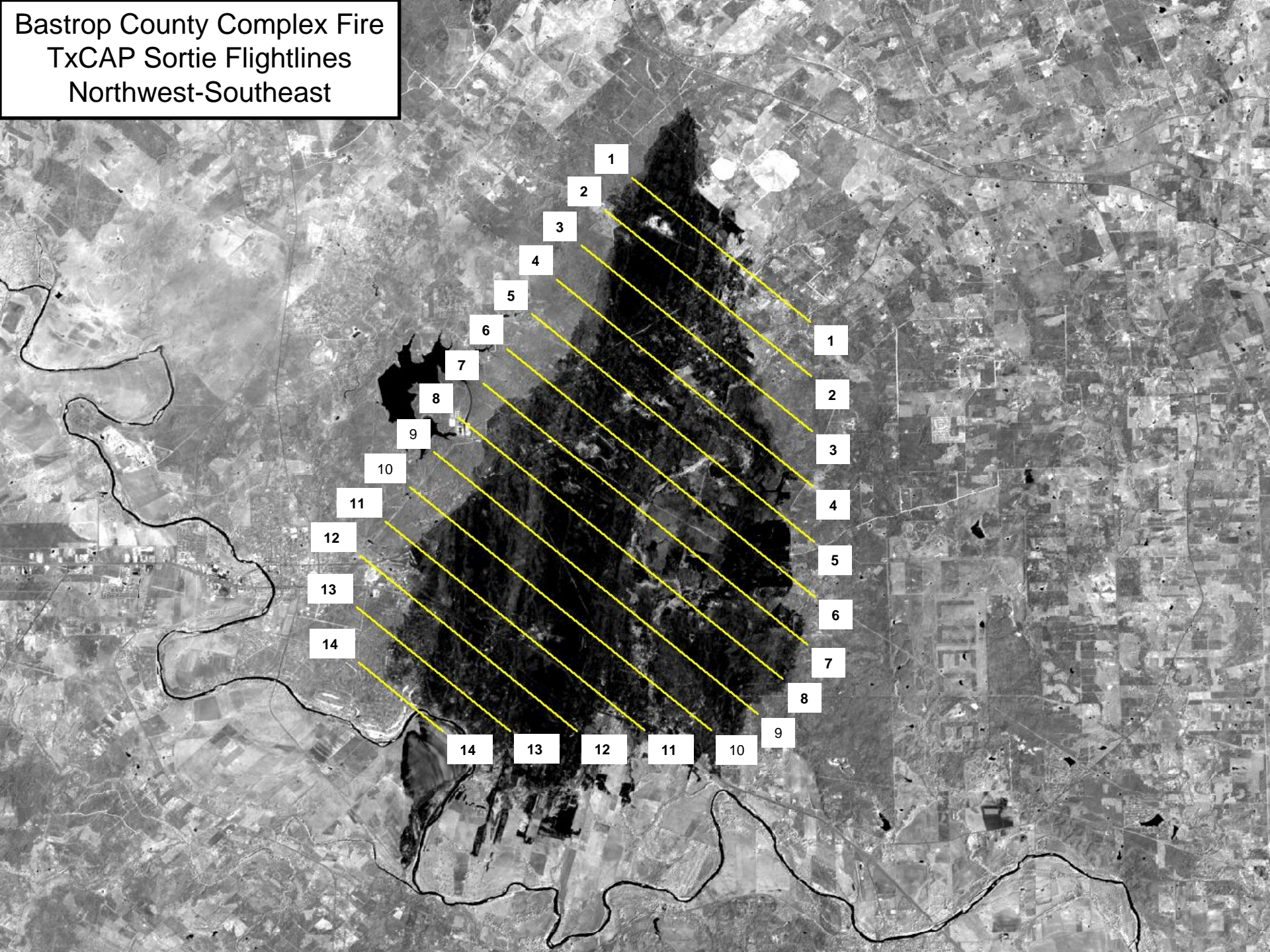
Continue to fly the NW-SE flightline pattern, but divert from your flightline when encountering concentrations of damaged structures. Circle the area containing many targets taking multiple exposures from assorted viewpoints. Return to the flightline and continue onward until encountering the next area with a large number of structures affected by the fire.

Extend your zoom lens toward its maximum telephoto focal length to collect detailed, “close-up” photos. Use of the 1/1000 second shutter speed should continue to limit ground motion.

If overcast conditions prevail and the surface is not illuminated by sunlight, the photographer should change the ISO speed rating to 400 or whatever is the optimum setting for the lighting conditions. Remember to change back to ISO = 200, if the skies clear.

Take photos in rapid succession to overlap the frames covering targets and to provide different viewpoints of the targets.

Bastrop County Complex Fire
TxCAP Sortie Flightlines
Northwest-Southeast



Bastrop Northwest - Southeast Flightlines

Flightline	Start Lon (NW)	Start Lat (NW)	Finish Lon (SE)	Finish Lat (SE)
1	97D 13.57M	30D 12.71M	97D 10.77M	30D 10.45M
2	97D 13.99M	30D 12.20M	97D 10.77M	30D 09.59M
3	97D 14.37M	30D 11.66M	97D 10.77M	30D 08.73M
4	97D 14.75M	30D 11.12M	97D 10.77M	30D 07.87M
5	97D 15.14M	30D 10.58M	97D 10.77M	30D 07.01M
6	97D 15.52M	30D 10.04M	97D 10.77M	30D 06.15M
7	97D 15.90M	30D 09.50M	97D 10.83M	30D 05.40M
8	97D 16.28M	30D 08.96M	97D 11.22M	30D 04.87M
9	97D 16.67M	30D 08.42M	97D 11.60M	30D 04.33M
10	97D 17.05M	30D 07.88M	97D 12.33M	30D 04.06M
11	97D 17.43M	30D 07.34M	97D 13.37M	30D 04.06M
12	97D 17.81M	30D 06.80M	97D 14.42M	30D 04.06M
13	97D 17.81M	30D 06.00M	97D 15.47M	30D 04.06M
14	97D 17.81M	30D 05.14M	97D 16.51M	30D 04.06M

The Second Phase of Aerial Photo Collection

Program the new waypoints for the NW-SE flightlines that are oriented to parallel many streets and property lines. These flightlines will give you better opportunities to take detailed photos of damaged buildings.

Continue to use the standard collection procedure by flying outbound and inbound legs along each flightline, but concentrate your photography on residential structures within the fire perimeter that were destroyed by the fire or survived intact.

Extend your zoom lens toward its maximum telephoto extension to collect detailed, “close-up” photos. Use of the 1/1000 second shutter speed should continue to limit ground motion.

As during Wednesday’s sortie, set the camera to Auto Exposure Mode with Shutter Priority and let the aperture settings auto-adjust to control the amount of light reaching the detector.

Take photos in rapid succession to overlap the frames covering targets and to provide different viewpoints of the targets.

Standard “Best-Practice” Camera Settings for Aerial Photography

The objective is to freeze ground motion by setting a fast shutter speed over typically brightly-illuminated targets.

Therefore, fixing an unchanging shutter speed at 1/1000 second should be the starting point.

To provide sufficient exposure latitude for use with a fast shutter speed, fix the ISO speed rating at 200.

Set the camera to Auto Exposure Mode with Shutter Priority and let the aperture settings auto-adjust to control the amount of light reaching the detector.

On brightly sunlit days over dark targets, the aperture setting may dip into the f/3.5-f/8 range, but most targets will be photographed in the f/8-f/16 range.

The combination of fast shutter speed and narrow aperture settings will produce the sharpest feature contrast in aerial imagery.

Geotagged Image Collection Summary

Acquire low-oblique, overlapping photos that do not include the horizon. Excellent examples are included in the following pages.

Collect images along the outbound leg and the inbound leg of each flightline before moving to the next flightline in the sequence.

Do not dwell on particular features during the initial overflights. The objective is to acquire as much comprehensive coverage as possible. We may want you to return to photograph particular features during a later flight.

Attempt to collect images that include the same areas and features under different illumination conditions by flying during different times of the day.

Ensure that your GPS unit is writing location records to the EXIF tags of your exposures. We will need to re-fly areas, if groups of images do not have embedded GPS tags.

Take your time. We have four days and at least eight sorties to accomplish the objectives. Each day we will plot your geolocated images and assess the quality of the exposures.

Gap areas and areas that are obscured by poor visibility and shadows will be reflown until adequate images are collected.

Please give me feedback if any of the collection procedures are unclear or if you have ideas about how to obtain better imagery through different techniques: gwells@csr.utexas.edu



Excellent wide-angle view over the burned areas in Bastrop State Park with a smoking hotspot in the distance.



Excellent image of the fire's impact on a residential neighborhood.



Very well-composed view of intact and destroyed homes near the fire perimeter.



Another well-composed view of intact and destroyed homes near the fire perimeter.



Excellent documentation of re-energization and other activities during the initial recovery.



An exceptionally detailed view of damage to an individual residence.