

**San Juan River Recovery Implementation Program  
Aerial Imagery Acquisition  
2016 Project Scope of Work**



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**Background:**

High definition aerial photography is used the San Juan River Recovery Implementation Program to develop maps of the river and evaluate habitat and geomorphic responses to flow releases from Navajo Reservoir and provide a database that can be used to compare future conditions. The imagery is also used for developing fish-habitat relationships when requested. Aerial imagery will be collected in early August after spring run-off when the San Juan River has reached base flow conditions. This period of time also insures that the program can collect data on critical habitat when it is available for use by the target T&E fish species.

**Methods:**

Using a Cessna TU-206 with a high definition UltraCam LP camera, Blue Skies Consulting (BSC) will acquire 10 cm GSD direct digital 4 band aerial photography of the San Juan River from the confluence of the Animas river (River Mile 180) to the inflow of Lake Powell (River Mile 0). The flight is planned for 60% forward gain, and in areas requiring it, 30% side overlaps. BSC will process and color balance the raw images data and post process the AGPS/IMU data collected during the flights, exporting exterior orientation coordinate data for each exposure. EO data will be used to support the completion of the aero triangulation. USGS 10 meter surface data will be used for the pixel restitution of all imagery and NIAP imagery will be overlaid for quality control of horizontal accuracy.

**Mission requirements area:**

- 1- All Filming will be done at approximately 3800 feet above ground
- 2- Filming speed will be done at approximately 130 miles per hour
- 3- River level for flight should be less than 1000 cubic feet per second
- 4- Total River miles distance to film is approximately 200 miles.

**The aerial images are obtained from:**

Michael Grossman  
Blue Skies Consulting, LLC  
[Mike.grossman@blueskies.aero](mailto:Mike.grossman@blueskies.aero)  
Office: 505-864-3700

**Tasks:**

- 1- Fly San Juan River with Vertically Oriented camera and take HD video and High Resolution Digital Stills.
- 2- Periodically provide images that are rectified for digital mapping.
- 3- Archive video/still frames and provide to researchers as requested.

**FY 2017 Cost:**

Aerial photography and image processing (93 flight lines and 1217 images)	- \$33,000.00
Aero triangulation and RGB ortho-photo production	- \$19,500.00
<b>Total Fee not including gross receipts tax</b>	<b>- \$52,500.00</b>