I. Project Title: Digital Photography/HD Video

II. Principal Investigators:

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III. Project Summary: in 2011 snowpack around the Upper Basin was high (150% to 196% of normal on May 5). If the snow melted rapidly the peaks could break all records. The spring remained cool and wet, the runoff broke a few volume records, but not instantaneous peak records. The Recovery Program worked with the Biology Committee in May to decide whether aerial photography of the peaks would be useful to understanding habitat formation and assist in showing areas where construction in the flood plain might be hazardous. The Recovery Program's channel monitoring program is expanding, into a habitat monitoring with additional projects expected in the future. Project funds were made available to take aerial digital imagery and begin processing the photos to the level that was done in 2008 (not georeferenced). The Program is looking for partners to assist with post processing.

IV. Study Schedule: Data collection was timed nicely to coincide with peak runoff from June 7th to thru the 11th (see Table1)

V. Relationship to RIPRAP: General Recovery Program Support Action Plan
I. Provide and Protect Instream Flows and Habitat

VI. Accomplishments of FY 2011: This peer group

Thanks to Bill Goettlicher with BOR for pulling together the flight crew and gathering the aerial images. His timing (with regard to the peaks) was excellent! The flow conditions as recorded at river gages for the 2011 flight are provisional to date. They are compared to the2008 flight (attached table). Please consider this information in your future discussions about where to focus our geo-referencing needs.

Table 1. Springs flows captured with aerial photography in the Upper Colorado River basin; 2008 and 2011

River	Reach Photographed in 2011	Date Flown	USGS Gage: Flow at time of flight; 2011 (specific timeframe)	Instant Peak flow recorded at this gage to date; 2011	Flow (avg daily) at this gage on day of flight;2008
Gunnison	Delta to Colorado River Confluence	June 7, 2011, pm	Gunnison near GJct 13,500 –14,400 cfs (12:00 – 17:00)	**15,100 cfs** June 8 @ 18:45	**13,400 cfs** June 3, 2008
Colorado	Rifle to Loma	June 8, 2011, am	Colorado Stateline 46,200 – 46,900 cfs (8:00 – noon)	**47,200 cfs** June 8 @ 15:00	**38,900 cfs** June 4, 2008
Yampa	Steamboat Springs to Maybell	June 8, 2011, pm	Yampa Below Craig 16,000 – 16,400 (11:00 – 15:00)	**16,400 cfs** during flight time	**10,500 cfs** June 4, 2008
Elkhead Ck	EHR dam to Yampa River confluence	June 8, 2011, pm	Elkhead Ck at Craig 1,640 cfs (@ 14:00)	**2,180 cfs** June 7 @ 9:15	Not flown
White River	Lower 25 miles	June 8, 2011, pm	White near Watson 4,550 – 4,600 cfs (15:00 – 17:00)	**5,070 cfs** June 9 @ 11:45	Not Flown
Green River	Split Mtn to Sand Wash	June 9, 2011, am	Green near Jensen 30,000 – 30,300 cfs (8:00 – 13:00)	**33,100 cfs** June 11 @ 2:30	**22,700 cfs** June 5, 2008
Colorado	Scott Matheson Preserve, Moab	June 9, 2011, pm	Colorado near Cisco 46,200 cfs (15:00)	**46,600 cfs** June 9 @ 21:45	Not Flown

VII. Project Status: Photos are being processed and put on a web site

VIII. FY 2011 Budget Status: peer review costs for FY11

A. Funds provided: up to $40,000
B. Funds expended: $40,000
C. Difference: $0

IX. Status of Submissions: Bill Goettlicher is stitching photos together

X. Signed: *Bill Goettlicher* December??, 2011
Principal Investigator Date:

Signed: *Jana Mohrman* December 19, 2011
Principal Investigator Date: