

ADOPT-A-BEACH PROGRAM

Long-Term Monitoring of Camping Beaches in Grand Canyon

Summary of Monitoring Observations for Year 2015

By
Paul Lauck¹

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*Examples of beaches with fluctuating flow cutbanks after HFE deposition.
Tatahatso Camp, RM 37.9 L (left) and Shinumo Wash Camp, RM 29.4 L (right).
Both photos taken 4/3/2015.*

¹Grand Canyon River Guides, Inc.
PO Box 1934, Flagstaff, AZ 86002

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Abstract

For the past twenty years, the Adopt-A-Beach repeat photography program has been monitoring beaches along the Colorado River through Grand Canyon. Through comparative examination of photo series and on-the-spot observations contributed by the volunteer photographers, conditions pertaining to the desirability of the beach as a camp for rafting parties are evaluated. Factors considered, which contribute to changes that may have an effect on the camp, both positive and negative, include: fluctuating river flows, aeolian action, vegetation increase/decrease, human introduced change, rain associated erosion or other actions, natural or anthropomorphic,. Beginning at River Mile 11.3, as measured downstream from the United States Geological Survey gaging station at Lees Ferry, AZ, the 239 miles of river in the study are divided into four separate geomorphic reaches, and the resulting evaluations are also segregated and examined by reach. The conclusions are presented as observational, monitoring data only.

For the time spanning the 2015 summer boating season, early April to late October, 37 of the 44 study beaches in the program had photographs and photographer comment sheets deemed of a sufficient period of time to be evaluated. Of these 37 beaches, 19% were classified as Unchanged for the time period, only one, or 3%, had Improved through the summer and 78% were considered as Degraded by the end of the season. Of the Unchanged beaches, 14% are located in the Marble Canyon reach, 43% in the Upper Granite Gorge reach, and 43% are contained in the Muav Gorge reach. None of the Unchanged beaches were in the Lower Granite Gorge reach. Twenty-four percent of the Degraded beaches are located in the Marble Canyon reach, another 31% in the Upper Granite Gorge reach, 34% are found in the Muav Gorge reach and 10% were located in the Lower Granite Gorge reach. The single Improved beach was located in the Upper Granite Gorge reach. The primary factor cited for those camps classified as Degraded was the fluctuating flow releases from Glen Canyon Dam. This designation applied to 15 of the beaches. Twelve of the beaches have rain events cited as the primary cause. Wind erosion, vegetation increase and human impacts were also cited as present.

A comparison of the beaches from late season 2014, with photos obtained prior to the November High Flow Experiment (HFE), and early 2015 were conducted on a total of 29 beaches. Only 59% of the beaches appeared Improved in the spring of 2015. The photos indicate that many possible positive results from the HFE were undermined by a prolonged relatively high fluctuating flow regime from December 1, 2014 through January 2015. Still, only 14% of the beaches Degraded during the winter, and twice that amount, 28%, were considered Unchanged. A few of the Unchanged camps actually had some sand addition, but the shear

cutbanks across the fronts of the beaches, indicative of a high fluctuating flow regime, precluded a more positive classification. Three of the 4 Degraded beaches had a shear much greater than found the previous year, and the other beach, Kanab, was practically eliminated by a flash flood during the winter.

¹ Grand Canyon River Guides, Inc., Flagstaff, Arizona (928) 773-1075

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