

Adopt – A – Beach:
Long-Term Monitoring of Camping Beaches in Grand Canyon
Summary of Monitoring Observations for Year 2014
and Overview of Results for 1996 through 2014 High Flow Events

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Abstract

For the past nineteen 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, campsite conditions are evaluated. Factors considered which contribute to changes, 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, that may have an effect on the camp. 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 2014 summer boating season, early April to late October, 29 of the 44 study beaches in the program had photographs and photographer comment sheets covering a sufficient period of time to be evaluated. Of these 29 beaches, 38% were classified as Unchanged for the time period, 3% had Improved through the summer and 59% were considered as Degraded by the end of the season. Of the Unchanged beaches, 36% are located in the Marble Canyon reach, 9% in the Upper Granite Gorge reach, another 46% are contained in the Muav Gorge reach and 9% are in the Lower Granite Gorge reach. Twelve percent of the Degraded beaches are located in the Marble Canyon reach, another 41% in the Upper Granite Gorge reach, 47% are found in the Muav Gorge reach and none were located in the Lower Granite Gorge reach. The primary factor cited for those camps classified as Degraded is the fluctuating flow releases from Glen Canyon Dam, with rain events cited as the second most common cause.

A comparison of the beaches from late season 2013, with photos obtained prior to the November High Flow Experiment (HFE), and early 2014 was conducted on a total of 32 beaches. With four exceptions, all of the beaches appeared Improved in the spring of 2014, despite a relatively high fluctuating flow regime in January. Of the 4 unimproved camps, 2 were in a Degraded condition and had beach recession and cutbanks indicative of erosion attributed to the fluctuating flows. Soap Creek Camp at River Mile 11.3 was classified as Degraded but was less definitive and the camp at 19.4 Mile incurred a significant amount of sand loss from both the beach front and the campable dune located in the eddy in front of the main beach.

Also included in this report is a compilation of the results of each of the past 5 High Flow Events. Three of the 44 beaches were excluded because they lacked at least three years of

evaluation. Twentysix of the beaches were classified as Unchanged or Improved after each HFE and half of these had received only an Improved rating when evaluated.

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