

# **Adopt – A – Beach:**

## **Long-Term Monitoring of Camping Beaches in Grand Canyon**

### ***Summary of Monitoring Observations for Year 2016***

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#### **Abstract**

For the past twenty-one years, the Adopt-A-Beach repeat photography program has been monitoring beaches along the Colorado River through Grand Canyon. By 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 (USGS, 2013), 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 2016 summer boating season, early April to late October, 39 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 39 beaches, 44% were classified as Unchanged for the time period, only one, or 3%, had Improved through the summer and 54% were considered as having Degraded by the end of the season. Of the 17 Unchanged beaches, 18% are located in the Marble Canyon reach, 53% in the Upper Granite Gorge reach, and 29% are contained in the Muav Gorge reach. None of the Unchanged beaches were in the Lower Granite Gorge reach. Twenty-four percent of the 21 beaches classified as Degraded are located in the Marble Canyon reach, another 24% in the Upper Granite Gorge reach, 43% 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 and was classified as Improved based solely on observer comments that parking of craft was easier at lower river levels. The primary factor cited for those camps classified as Degraded was the fluctuating flow releases from Glen Canyon Dam. This designation applied to 14 of the beaches. There were 5 beaches classified as Degraded where rain events are cited as the primary cause. Wind erosion, vegetation increase and human impacts were also cited as present, and all were considered the primary agent of change on at least one beach each.

A comparison of beach evolution from late season 2015 to early April 2016 was conducted on a total of 37 beaches. One third (32%) of the beaches appeared to have Improved by the spring of 2016, 19% of the beaches Degraded during the winter, and nearly half, 49%, were considered Unchanged. Of the 7 beaches classified as Degraded for this period, one (14%) is located in the Marble Canyon reach, none are found in the Upper Granite Gorge reach, 57% are in the Muav Gorge reach and 29% are in the Lower Granite Gorge. Twelve beaches showed an Improved state for this period, with 42% in the Marble Canyon reach, 33% in the Upper Granite Gorge, 17% in the Muav Gorge reach and 1 (8%) is in the Lower Granite Gorge reach. Of the 18 beaches classified as Unchanged over the winter, 17% reside in the Marble Canyon reach, the Upper Granite Gorge and Muav Gorge reaches had 44% and 39% respectively and none are located in the Lower Granite Gorge.

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