

Adopt – A – Beach:
Long-Term Monitoring of Camping Beaches in Grand Canyon
Summary of Monitoring Observations for Year 2018

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Abstract

For the past twenty-three 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. The resulting evaluations are divided into seasonal change (November through March and April through October) and are also examined by reach. The conclusions are presented as observational, monitoring data only.

A comparison of beach evolution from late season 2017 to early April 2018 was conducted on 23 of the 44 study beaches. One (4%) of the beaches, Olo at RM146.1L, showed Improvement into the spring of 2018, 7 (30%) of the beaches had Degraded between the latest 2017 photo and early spring 2018, and 15 (65%) were considered to be Unchanged for the same time period. Of the 7 beaches classified as Degraded for this period, three (43%) are located in the Marble Canyon reach and two (29%) were found in the Upper Granite Gorge reach. The Muav Gorge and the Lower Granite Gorge each had one (14%) beach considered as Degraded. Fifteen beaches remained Unchanged for this period, with 7 (47%) in the Marble Canyon reach, 3 (20%) in the Upper Granite Gorge, 5 (33%) in the Muav Gorge reach and none located in the Lower Granite Gorge reach. Only one of the 23 beaches examined was classified as Improved since late summer 2017 and was located in the Muav Gorge at Olo Camp, RM 146.1L. The appearance of new sand on the beach surprised both the volunteer who documented the beach and the analyst who compared before and after images.

For the time spanning the 2018 summer boating season, early April to late October, 31 of the 44 study beaches in the program had photographs and photographer comment sheets spanning a sufficient period of time to be evaluated. Of these 31 beaches, 5 (16%) were classified as Unchanged for the time period, 24 (77%) were considered as having Degraded by the end of the season, and 2 (6%) of the 31 were seen to have Improved. Of the 5 Unchanged beaches, 40% are located in the Marble Canyon reach, 25% in the Upper Granite Gorge reach, and 50% are contained in the Muav Gorge reach. None of the Unchanged beaches were in the Lower Granite Gorge reach. Twenty-five percent of the 24 beaches classified as Degraded are located in the Marble Canyon reach, another 33% in the Upper Granite Gorge reach, 42% are found in the Muav Gorge reach and None were located in the Lower Granite Gorge reach. Occasionally, a beach will exhibit Improvement during a season but factors will conspire to Degrade it before Fall. In all instances, a beach will receive a classification based on its condition on the final date

of evaluation for that season. The primary factor cited for 12 of the camps classified as Degraded was beach recession due to the fluctuating flow releases from Glen Canyon Dam. There were 10 beaches classified as Degraded with rain events cited as the primary cause. Wind erosion was a primary factor in one Degraded classification and Vegetation encroachment in one other. Human impacts, as well as the previously cited factors, were all noted as secondary agents of change on one or more beaches.

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