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MEMORANDUM

COLETON CANYON ENVIRONMENTAL
STUDIES OFFICE

H2623 (GRCA-8213)

JAN 24 1996

To: Cultural Resource Program Manager, GRCA

From: Project Archaeologist, Leap (LISA M.)

RECEIVED

Subject: Fiscal Year 96-1 Resource Monitoring Trip Report

The annual resource river monitoring trip (FY 96-1) was conducted October 11-26, 1995, from Lee's Ferry to Diamond Creek. Although we had several agendas, i.e., recreation work, water quality, 34 sites were monitored for the GCES archaeological river corridor program. Several sites visited on this trip include annual and semi-annual sites and 13 "no impact" control sites. These "no impact" sites represent a 10% sample of the sites that were categorized as having no impact prior to the interim flow regime. Several of these "no impact" sites will change in FY97 because it was determined on this trip that they are located above 300,000 cfs.

Site specific recommendations and observations of the sites monitored are below followed by the personnel trip list. We also had time to complete observations at the surface analysis unit at site C:13:385. The results illustrate additional materials and minor artifact movement. Detailed results follow the personnel trip list. As an update regarding the yucca sandal that was discovered last February, it was determined by the park archaeologist and park curator to collect it this February. See B:10:230 below for more details.

Site Observations and Recommendations

A:15:017 -- Shelter with Artifacts

People have visited the site, as seen by groundstone movement, and rodent burrowing and minor surface erosion are also present. These disturbances, however, are nonthreatening, and overall, the site is in good, stable condition. This site will be deleted from the "no impact" control group because it is above 300,000 cfs.

A:16:148 -- Roaster Complex

Sheep trails exist throughout the heavy vegetated terrace, but basically the site appears stable with little or no change. The monitoring schedule recommended for this site is biennially.

A:16:156 -- Shelter with Walls and Artifacts

Observations show that minor animal trailing and burrowing are present. Currently these impacts are not of concern because the site appears fairly stable and well-protected from the elements. Monitoring will continue with the backcountry monitoring program,

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and will no longer be a "no impact" control site because it is above 300,000 cfs.

B:10:121 -- Masonry Room

As a no impact control site, the structure is in good, stable condition. Last year it was recommended that trail obliteration be implemented, yet this year shows a decrease in animal trailing, therefore, obliteration is not necessary. Annual monitoring will continue.

B:10:230 -- Shelter with Midden and Wall

This site shows no sign of human disturbance, but it does exhibit a terrace-based gully and severe packrat activity. Last year a sandal was uncovered by a rodent. (At that time, a detailed description was written and several photographs were taken. After, the sandal was left in situ with a small rock placed on top of it to protect it from further rodent activity.) On this trip it was very difficult to duplicate photos, let alone discern where the sandal was due to the rodent disturbance. After the trip the status of the sandal was discussed with the park archaeologist and the park curator. The determination to collect the sandal was based on the severe packrat disturbance to the immediate location of the sandal, and the fact that curation does not house a sandal of this nature. (The ceramics at this site suggest Early-Mid PII and late prehistoric - early Paiute cultural affiliation.) This is a "no impact" site that will probably be deleted from the project and turned over to the backcountry archaeology program because it is above 300,000 cfs.

B:10:236 -- Lithics, FCR

Surface erosion, terrace-based gullying, animal trailing are all present, but do not threaten the site's stability. This site is in good condition, but it is above the 300,000 cfs therefore it will be deleted from the GCES monitoring program and turned over to the park backcountry monitoring. This was chosen initially as a "no impact" site.

B:10:248 -- Shelter with Enclosed Living Area

Surface erosion, eolian erosion/deposition, animal burrowing and spalling are present but nonintrusive. It is recommended that monitoring discontinue because the site is located on bedrock ledges that are not affected by base-level changes, thus the current interim flow regime is not impacting the site. Prior to this, the site needs to be tested for National Register eligibility because the first testing results were nonconclusive. Significance testing will be implemented this spring.

B:15:121 -- Lithics with Charcoal

This site is not in stable condition even though it is a no impact control site. It exhibits terrace-based gullying, slumping and spalling, and a new gully is forming near the base of the Tapeats.

Monitoring will be turned over to the park because the site is above the 300,000 cfs level.

B:15:126 -- Granaries and Artifacts

Bighorn sheep trails travel through the area, but are not in the site boundary. The only changes noted is the slow deterioration and slight movement of mortar at several granaries. This is a "no impact" site located below the 300,000 cfs therefore monitoring will continue yearly.

B:15:132 -- Prehistoric Structures with Historic Cans

The site appears stable with the exception of minor rodent burrowing. The historic cans have been rearranged ever so slightly, yet it is difficult to discern if this was caused by human visitation. This was a "no impact" site, but it is located high above the 300,000 cfs level therefore monitoring will continue under park authority.

B:15:143 -- Shelter with Charcoal and Artifacts

Increased spalling of the Tapeats was noted in the colluvial gravels near Feature 2, and the dripline from the Tapeats is forming a shallow terrace-based gully along the site boundary. The site was reassessed for testing but because it is relatively stable, testing is not warranted. Monitoring will continue yearly due to the site's status as a "no impact" control site, and its location below 300,000 cfs.

C:09:050 -- Isolated Pot Cache

The large rock slab on the exposed bank where the pots were found moved downslope. A debris flow in the spring of 1995 has cut into the western bank of the site and has made it steep and unstable, but it is not impacting the site directly. A foot trail from Little Nankoweap to Nankoweap Delta is situated approximately 20 m east of the site, yet visitor-related impacts are not a problem. Semiannual monitoring will continue.

C:09:062 -- Roaster, Rock Alignment and Artifacts

Side canyon erosion and animal trailing are present but do not threaten the site. Generally, the site appears very stable, and a monitor schedule of every five years is recommended due to its proximity to Nankoweap Creek.

C:09:080 -- Ephemeral Structures

Generally the site is located on a steep slope, thus causing natural downslope erosion. The dripline from the shelter has created a terrace-based gully on the site but currently it is not impacting the cultural materials. The main cause of disturbance to this site is rodent activity. They disarranged the charcoal deposit, the mortar on the back of the shelter and they are starting to nest around the rock alignment in Locus A. An infrequently used human and animal trail exists just below the site but poses no threat. Monitoring will be turned over to the park

because the site is above 300,000 cfs. It was monitored as a "no impact" site and will be replaced by a site that is the responsibility of the Bureau.

C:13:033 -- Single Room with Lithics

No physical impacts were noted on this visit, but a 10" iron chisel was placed on the western wall of the structure, a new collection pile was present and the Beamer Trail passes nearby. Monitor the site in five years mainly for visitor-related impacts.

C:13:070 -- Small Structures, Artifacts

The two upright manos are leaning against each other. Deflation was noted but not noticeably increasing. In Locus A there is animal burrowing, slight undercutting in the arroyo, and the entrenched river-based gullies on the western edge are active. At Locus D the arroyo is active and slumping, and small animal burrows are present. The human trails at Loci A and B are more visible, therefore, it is recommended that trail obliteration be implemented. Annual monitoring will continue and trail obliteration will be a priority next year.

C:13:098 -- Historic Structures, Artifacts

Animal burrowing exists inside the cabin and against the log structure just south of the cabin. A section of the bed frame near the headboard has split into two pieces and some minor movement of the frame occurred. Near the artifact stump rills increased in depth, 4 - 6 cm. The small river-based gully near the entrance of the cabin appears to be widening out and filling in. Foot traffic seems to play a major roll in the growth of this gully. Movement of artifacts near and on the stump and in the cabin were also observed. The only recommendation for this site is that vegetation be planted in the gully near the cabin entrance. Monitoring will continue semiannually.

C:13:099 -- Rooms, Artifacts, Charcoal

In September 1995, 44 checkdams were constructed in the main arroyo that cuts through several features. The checks were not monitored on this trip, only the features. Since last monitored in March of 1995 there has been increased surface erosion, gullying, river-based arroyo cutting, bank slumpage, eolian/alluvium deposition and basic erosion. All features, except for Feature 5, are unstable, and new materials continue to be exposed, i.e., new groundstone is eroding from Feature 3. Semi-annual monitoring will continue.

C:13:100 -- Habitation Rooms, Artifacts and Cists

Features 4 and 5 show an increase in surface erosion and river-based gullying. The remaining features illustrate no signs of physical impact. Due to the placement of checkdams this past September 1995, foot traffic increased, especially near Feature 2. It is recommended that these trails near Feature 2 be obliterated and that monitoring continue semiannually. Monitoring of the

checkdams will occur once a year. Twenty-six checks were placed on this site in the two river-based streams.

C:13:101 -- Roomblocks, Cists and Artifacts

Locus A illustrated minor deflation, yet that was the only change observed due to the general stability of the site and the thick vegetation. The old Beamer Trail is recovering nicely, and no human visitation is apparent. It is suggested that monitoring continue every five years.

C:13:272 -- Structures, Fire Features, Artifacts

Minor physical impacts noted on the site include surface erosion, terrace-based gullying and eolian/alluvial erosion and deposition. The site is in stable condition and a monitoring schedule of every three years is recommended.

C:13:273 -- Roaster Complex

Surface erosion is present at Feature 2, but overall the site appears stable. NPS completed trail work in February 1995 on the existing Beamer Trail. Near Feature 1 they installed six surface log checks spaced 2 m apart, and 10 m upstream from that, 11 surface rock checks were placed on the trail spaced 1 - 1.5 m apart. Additional mitigation plans are to stabilize Feature 3 adjacent to the river-based arroyo. Even though this feature did not change since the last visit, it is located in a very fragile area. Furthermore, it was determined that Feature 5, a fire feature in the arroyo wall, no longer exists. Monitoring will continue yearly.

C:13:274 -- Fire Feature with Possible Roomblocks and Water Control
The site is in good condition with the exception of increased rodent disturbance in the fire feature and a terrace-based gully. No visitor-related disturbances were noted. Annual monitoring will continue because this is a no impact control site.

C:13:336 -- Fire Features and Rock Alignments

Surface erosion is present at Feature 2, but generally the site is in stable condition with no threatening signs of physical or visitor-related impacts. Monitoring will continue every five years.

C:13:339 -- Rock Alignments, Fire Features and Artifacts

Surface erosion and alluvial erosion have increased, and side canyon erosion and river-based gullying are present. Feature 1, a fire feature, is located in the Beamer Trail which is adjacent to an alluvial slope that is deteriorating rapidly due to rain and soil compaction caused by foot traffic. It is recommended that native vegetation be planted in this area. The trail work completed in February 1995, totally concealed Feature 7. An annual monitoring schedule will continue.

C:13:347 -- Slab Wall and Artifacts

There is a slight increase of surface erosion in the river-based arroyo, and small animal burrowing is apparent behind a rock slab that has charcoal underneath it. A foot trail exists along the river from Cardenas camp but it does not threaten the site. Annual monitoring is probably sufficient unless there is a big event which could expose or erode more artifacts.

C:13:367 -- Structure, Charcoal and Lithics

The site is stable with only minor surface erosion, spalling, and animal trailing along the slope below the site. The slope is composed of very loose soil therefore trailing by bighorn and monitors may pose as a problem in the future. This was a "no impact" control site but will be deleted from the GCES program because it is above 300,000 cfs.

C:13:371 -- Rooms, Storage, Fire Features, Artifacts

Although this site is located on a fragile delta, it is in fairly stable condition. The only areas of concern would include the cutbanks at Feature 4 and above Features 6 and 7 where an animal bone was exposed due to bank slumpage. There is also a river-based stream adjacent to Features 2 and 5. This site is an obvious example of erosion and slumping hastened by the loss of supporting, lower beach sand. It is highly recommended that Feature 2 be assessed for erosion control measures, and that a charcoal sample be collected from this feature in the near future. Semiannual monitoring will continue. (In interesting note: While monitoring above Features 6 and 7 one of the monitors took a step and sunk approximately two feet. Just an example of how fragile this area is.)

C:13:386 -- Isolated Slab-lined Cist

The site is located on a semi-stable dune with an approximated slope of 20 degrees. Physical impacts observed include a terrace-based gully, surface erosion, eolian deposition and rodent burrowing. A set of old foot prints were also noted on the downslope side of the cist. Biennial monitoring will continue due to the gradient of the dune.

C:13:387 -- Shelter with Wall Features and Artifacts

Increased impacts observed include surface erosion, river-based gullying and arroyo cutting, bank slumpage, deposition and animal-caused erosion. These were illustrated mostly at Feature 6 where the entire bank had slumped, and at the location of the lower metate, that collapsed into the arroyo. It is recommended that the metates be monitored twice a year and the remaining features be monitored every three to five years.

G:03:003 -- Roaster Complex

Although surface erosion, animal-caused erosion, side canyon erosion and spalling are present at this site, the main impact is visitor-related. Collection piles (dispersed by the monitors after

monitoring) exist and the trails people take to the overhang are very obvious and becoming entrenched like gullies. It is recommended that these trails are obliterated as soon as possible. Monitoring will continue semiannually.

G:03:019 -- Shelter with Midden, Fire Features

The only disturbance noticed is animal-caused located near the base of the wall and in the cleared area. The site is generally in stable condition and will be monitored by the park because it is above the 300,000 cfs. It was originally chosen as a "no impact" control site.

G:03:026 -- Roaster Complex

Physical impacts include animal-caused erosion, terrace-based gullying and general instability of the soil in some locations (i.e., there is a small sinkhole approximately 2 feet deep near Feature 7). Multiple trailing does exist and it is highly recommended that one designated trail be developed and the rest be obliterated. This would be accomplished, hopefully on the February, 1996 rehab trails trip. Overall, the site has a thick vegetation cover and is stable. Monitoring will continue annually.

G:03:073 -- Roaster Complex, Historic Trash

Base-level changes of the current river flow has no effect on this site because the site is located on the Tapeats ledges. Surface erosion and rodent burrowing were observed, but no visitor-related disturbances were noted. The site should be monitored one more time to acquire photographs without the dense vegetation in order to determine a monitoring schedule.

Trip Personnel

Doug Deutchslander, NPS Boatman
Tamara Wiggans, NPS archaeologist, boatman
Deb Petersen, NPS archaeologist, boatman
Lisa Leap, project archaeologist
Duane Hubbard, NAU research assistant
John Rihs, NPS water quality
Dave Kramer, UNLV water quality

Upper Half

Dave Desrosiers, NPS Boatman
Dave Trevino, NPS Boatman
Ann Johnston, VIP Cook
Helen Fairly, NPS archaeologist
Jason Wear, NPS archaeologist
Jennifer Kunde, NAU archaeologist
Linda Jalbert, NPS rec., boatman
Mary Devine, NPS rec.
Suzanne Davis, NPS rec.

Lower Half

Mark Manone, VIP Boatman
Barb Nelson, NPS Telecommunications, Cook
Chris Coder, project archaeologist
Linda Mazzu, VIP water quality

C:13:385

Surface Analysis Unit

10/16/95 10:15am to 11:17am

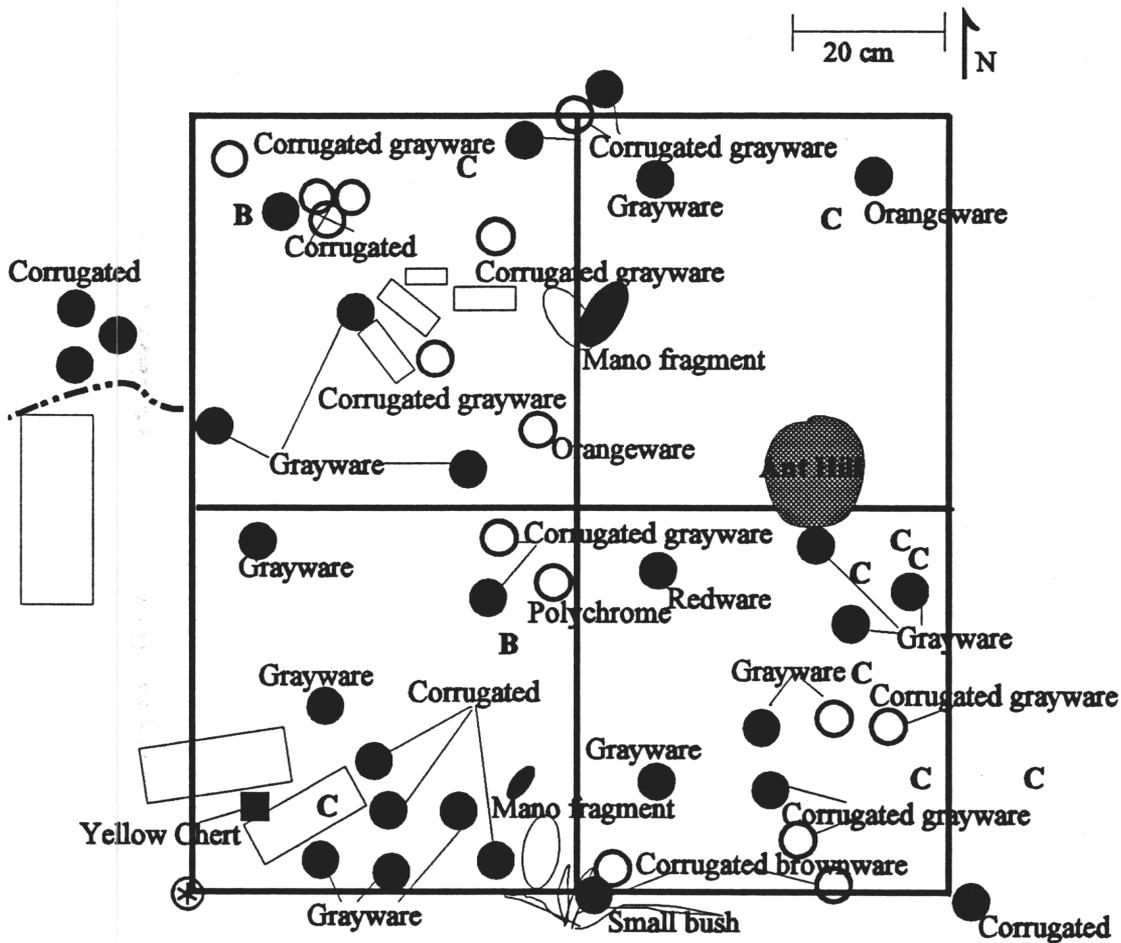
Jennifer Kunde

There is a lot of pottery in and around this test unit. Corrugated, black-on-white, polychrome, and redwares are all identifiable. There are also some interesting chert flakes in yellow, red and orange just outside the boundaries of the unit. Mano fragments are everywhere. Charcoal is present in and outside the test unit. Several bone fragments can be seen both inside and just outside the test unit.

An ant hill exists in the unit but there does not appear to be artifacts coming out of the hill. There is a small gully adjacent and to the west of the unit. Hundreds of artifacts are washing downslope in this gully.

Initially, 18 ceramic artifacts plus one bone were identified. During the second observation, lithics and charcoal were first identified. There was also a large increase in the number of identifiable ceramic artifacts. The total artifact count increased by 33 artifacts. This increase could be due to the surface erosion that is occurring on the terrace edge, running off into the adjacent gully. Only one of the previously identified artifacts was not relocated. Artifacts previously identified are not moving out of the surface analysis unit, but new artifacts are being identified.

It is recommended that the monitoring schedule be adjusted so that the disappearance of this artifact concentration and possible cist can be monitored more closely. The bone in the NW corner of the unit may be a human metatarsal.



C:13:385	Time 1 Artifacts Observed	Time 2 Artifacts Observed	Percent Change in Artifact Density
	18	51	183% increase

C:13:385 Surface Analysis Unit near Feature 2. Initiated 94-3 (MJ 3-1-94), analyzed 96-1 (JLK 10-16-95). B = bone C = charcoal
 Small pieces of sandstone are covering the surface area.
 There is a gully forming directly west of the unit. A substantially sized ant hill is located within the unit. As of 96-1, no artifacts appeared to have been brought up from the ant hill.