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of the
Grand Canyon *and* Lower Colorado River Regions in the United States and Mexico

16th to 21st Centuries

Volume 1, Part B: Bibliography

FIFTH EDITION

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CATALOGERS NOTE
canon : *a standard or essential list of works*

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22

HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS

Hydrological and sedimentological studies of the Colorado River mainstem from Glen Canyon Dam to the beginning of Lake Mead

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PART 22. HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS

OVERVIEW. This part encompasses all physical studies of the water flow of the Colorado River, applied research on its carried and bottom sediment, and the effects of the river's fluctuating flow on the distribution of sediment on the banks of the river.

RELATED MATERIAL

PART 3. *THE NEW YORK TIMES* for additional items that relate to this part of the bibliography (which are not repeated in this part)

PART 11, SECTION 2. LOWER COLORADO RIVER—GEOLOGY for items relating to geological and hydrogeological studies and investigations in Lake Mead and the lower Colorado River downstream from Hoover Dam

PART 19. BIOLOGY AND ECOLOGY for items relating to effects on biological resources as the result of hydrogeological processes in the Colorado River through Grand Canyon

PART 21. GEOLOGY for items relating to modern groundwater in the Grand Canyon region and to hydrogeological studies of tributaries

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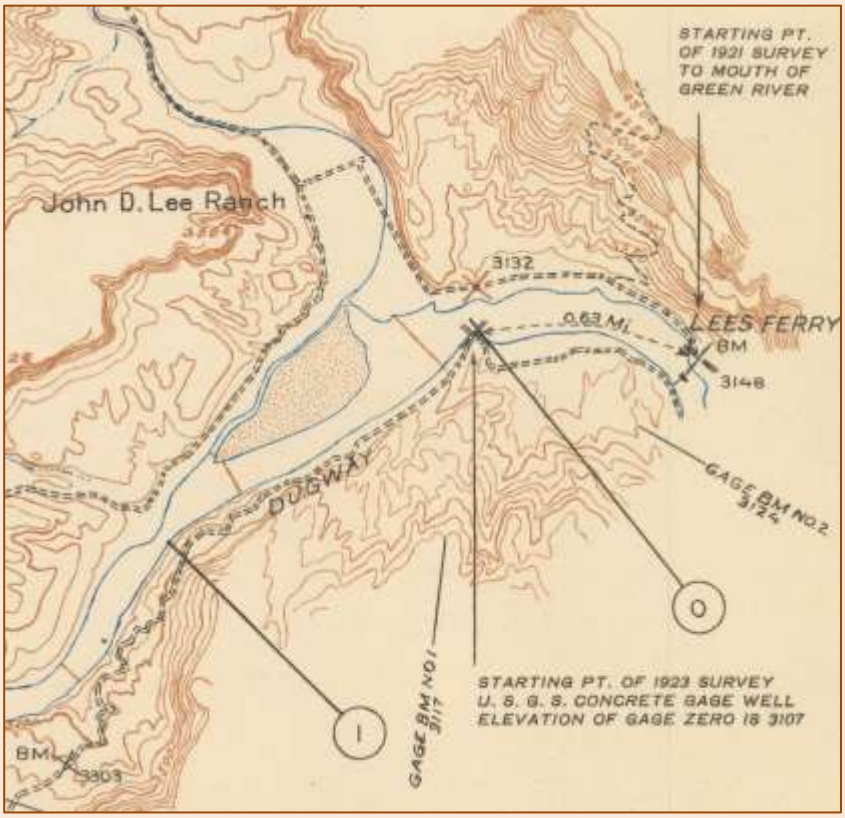
NOTES FOR PART 22

SOME citations from publications produced by the Geological Society of America include references to supplementary material in the Geological Society of America's Data Repository. Originally, this material could be requested by mail application to the society, and in the early 1990s a compilation of Data Repository items was available on microfiche, but today all of it is accessible online at https://www.geosociety.org/datarepository/).

By convention, mileages on the Colorado River are measured both up- and downstream from the U.S. Geological Survey's stream gauge at Lees Ferry (see a detailed historical and technical overview by Topping *et al.*, 2003, ITEM NO. 22.572). However, due to the methods of tying together the surveys of the upper Colorado (1921) and lower Colorado (1923)—see Birdseye and Gerdine, 1922, ITEM NO. 22.1171, and Birdseye, 1924, ITEM NO. 22.52, respectively—there remains a gap of 0.63 mile between the two respective Mile 0 points, as shown here (from Birdseye, 1924, Sheet A); this may be called "Mile Null", or the "shortest mile in the world", as it were:



Anonymous (*continued*)

GO TO END OF ANONYMOUS IN THIS PART

ANONYMOUS

PUBLICATION NOT DATED: DATE ESTIMATED, ATTRIBUTED, OR KNOWN FROM ORIGINAL RECEIPT

NO DATE 22.870 *U.S. Geological Survey stream gaging along the Colorado River in Grand Canyon National Park.* U.S. Geological Survey, 2 pp. [2013?] [Fact sheet.]

NO DATE 22.871 *Monitoring sand storage to conserve sandbars in Grand Canyon National Park.* U.S. Geological Survey, [2] pp. [2013?] [Fact sheet.]

NO DATE 22.997 *U.S. Geological Survey stream gaging along the Colorado River in Grand Canyon National Park.* U.S. Geological Survey, 2 pp. [2015.] [Fact sheet.]

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1882 22.1235 The sand in the Colorado River. *American Architect and Building News*, 12(355) (October 14): 187. [Credited to *Chambers's Journal*; see ITEM NO. 21.5207 (Anonymous, 1882).]

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1907 22.783 [Superficial note regarding erosive power of sediment in Colorado River in Grand Canyon.] *The Church Standard*, 92 (New Series, 30) (15) (February 9): 494. [Cites A. R. Cook.]

1907 22.856 Rivers and floods. *Monthly Weather Review*, 35(5) (May): 208-209. [See p. 209, regarding water gages: "Service has also been inaugurated along the Colorado River, under the supervision of the local office of the Weather Bureau at Denver, Colo., and special river stations have been located at . . . Grand Canyon and Topock, Ariz., on the Colorado River." (ENTIRE NOTE)]

1907 22.808 [Landslides affecting rapids in Colorado River, Grand Canyon.] *In:* History In the Making [SECTION]. *The Epworth Herald* (Chicago and New York), 18(31) (December 28): 803 (concurrently paginated for issue, 15). ["Recent landslides and earthquakes have wrought important changes in the Grand Canyon of the Colorado. At one point

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some dangerous rapids have been transformed into a broad and plaid channel by the fall of a mountain front into the great gorge. Such swift changes in the canyon's structure have doubtless occurred often enough in the past to account for much of the vast spaces which lie between its far separated rims." (ENTIRE ITEM)]

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through the softer mantle." (ENTIRE NOTE) (Of course, this does not take into account the Colorado River rapids that occur in the reaches where Paleozoic strata constitute the exposed bedrock. —*E.E.S.*)]

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otherwise the waters of the ocean, it is argued, would be so attracted by the northern continents as to make the mean level of the sea greater there than at the south. We have never seen it proved that this is not the case, nor has it been shown that the Colorado river is much higher at its edges than in the middle where it runs through canons several thousands of feet in depth." (Fisher does not mention the Colorado River in this context.)]

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PART 22. HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS

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Beus, Stanley S.; Kaplinski, Matt A.; Hazel, Joseph E., Jr.; Tedrow, Linda A.; Mayes, Hilary B.; AND Fillmore, R. P.

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Bielski, Andrezej

2011 22.1265 Modelowanie transportu zanieczyszczeń w ciekach powierzchniowych. *Politechnika Krakowska im. Tadeusza Kościuszki* (Kraków)*, Seria Inżynieria Środowiska, Monografia 393*, 196 pp. [This monograph "describes [a] mass transport model for unsteady flow and concentration conditions" (from the English-language abstract, p. 192), principally for studying pollutant transport in rivers, with respect to longitudinal dispersion in bottom sediment. See introduction to section "6. Identyfikacja i wyznaczenie współczynników modelu" and subsection "6.1. Założenia i zależności pomocnicze dotyczące równań przepływu", which detail a Colorado River flow model in Grand Canyon (pp. 135-139); and summary subsection "7.1. Zestawienie wniosków szczegółowych", specifically items 41 (p. 180) and 47 (p. 181), which pertain to the Colorado River.] [In Polish, with abstracts also in English and Russian.]

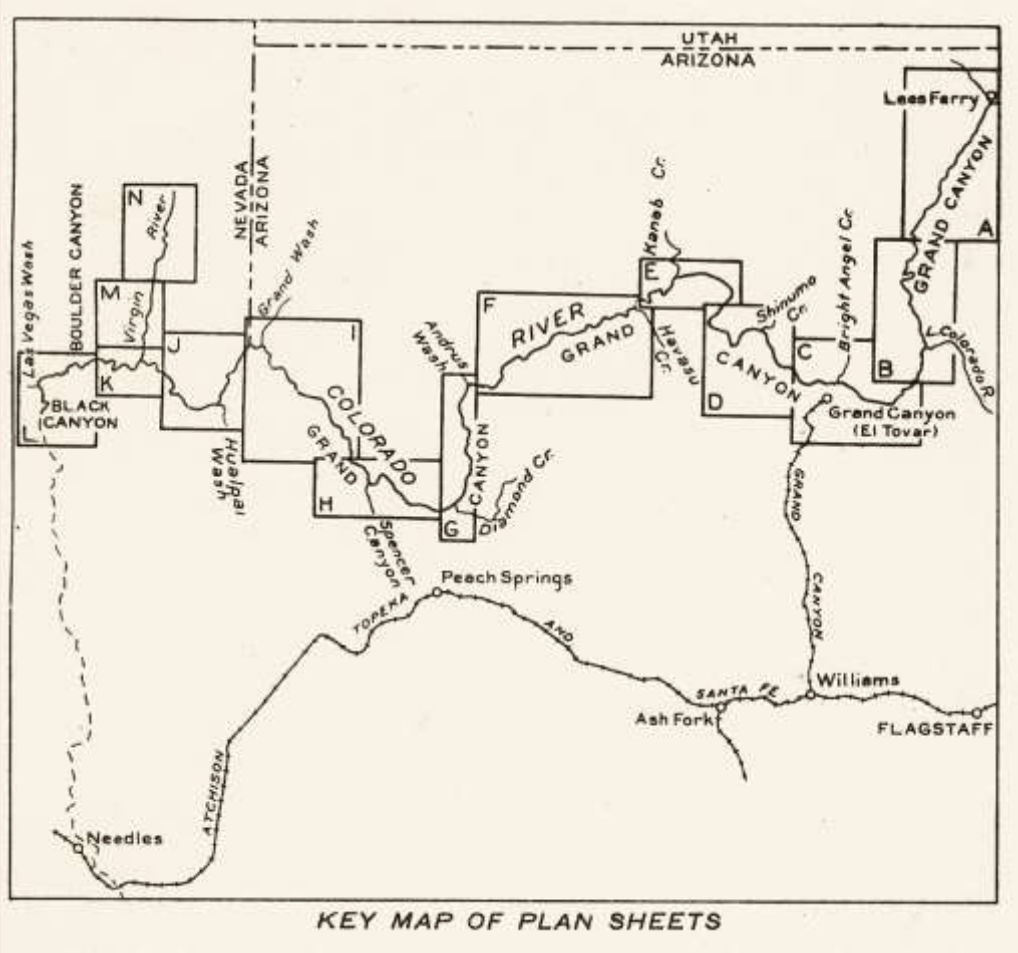
Birdseye, Claude H.

NO DATE 22.1038 *Plan and profile of Colorado River from Lees Ferry, Ariz., to Black Canyon, Ariz.-Nev., and Virgin River, Nev.* Oakland, California: American River Touring Association, 1 map and 1 profile on 8 sheets, and mileage schedule sheet; scale [*ca.* 1:63,360]. [1966?] [Reproduction from Birdseye (1924) at about one-half original size but without correcting the stated 1:31,680 scale.]

PART 22. HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS

1924 22.52 *Plan and profile of Colorado River from Lees Ferry, Ariz., to Black Canyon, Ariz.-Nev., and Virgin River, Nev.* (Topography by R. W. Burchard and C. H. Birdseye.) U.S. Geological Survey, 21 sheets consisting of 14 plans (maps, sheets A-N, scale 1:31,680, contour interval 50 feet, contour interval on river surface 5 feet; *see key below*) and 7 profiles (sheets O-U, scale 1:81:680, vertical scale 1 inch = 20 feet). [Virgin River, between Colorado River and Muddy Creek, plans on sheets K, M, N.] [Full set displays Colorado River Miles 0-356, and Virgin River Miles 0-28. "Mileage [on Colorado River] is measured [downstream] from U. S. G. S. concrete gage well opposite mouth of Paria River".] [*NOTE*: For continuation of series from Black Canyon to the southern international boundary, see U.S. Geological Survey (1927, ITEM NO. 11.18458).] [Regarding Mile 0, see in notes to Part 22 herein.]

≡ CROSS-LISTINGS |CITED» GCNHA Monograph 2: pages 46, 80| |CITED» GCNHA Monograph 8: page "3–Special Section 2–1"| FQ15:669 FQ21:432 [Sheets A-N], 424 [Sheets O-U]



1943 22.67 *Plan and profile of Colorado River from Lees Ferry, Ariz., to Black Canyon, Ariz.-Nev., and Virgin River, Nev.* (Topography by R. W. Burchard and C. H. Birdseye.) U.S. Geological Survey, 21 sheets. [Reprint of Birdseye (1924) but also noting, "Printed 1924".]

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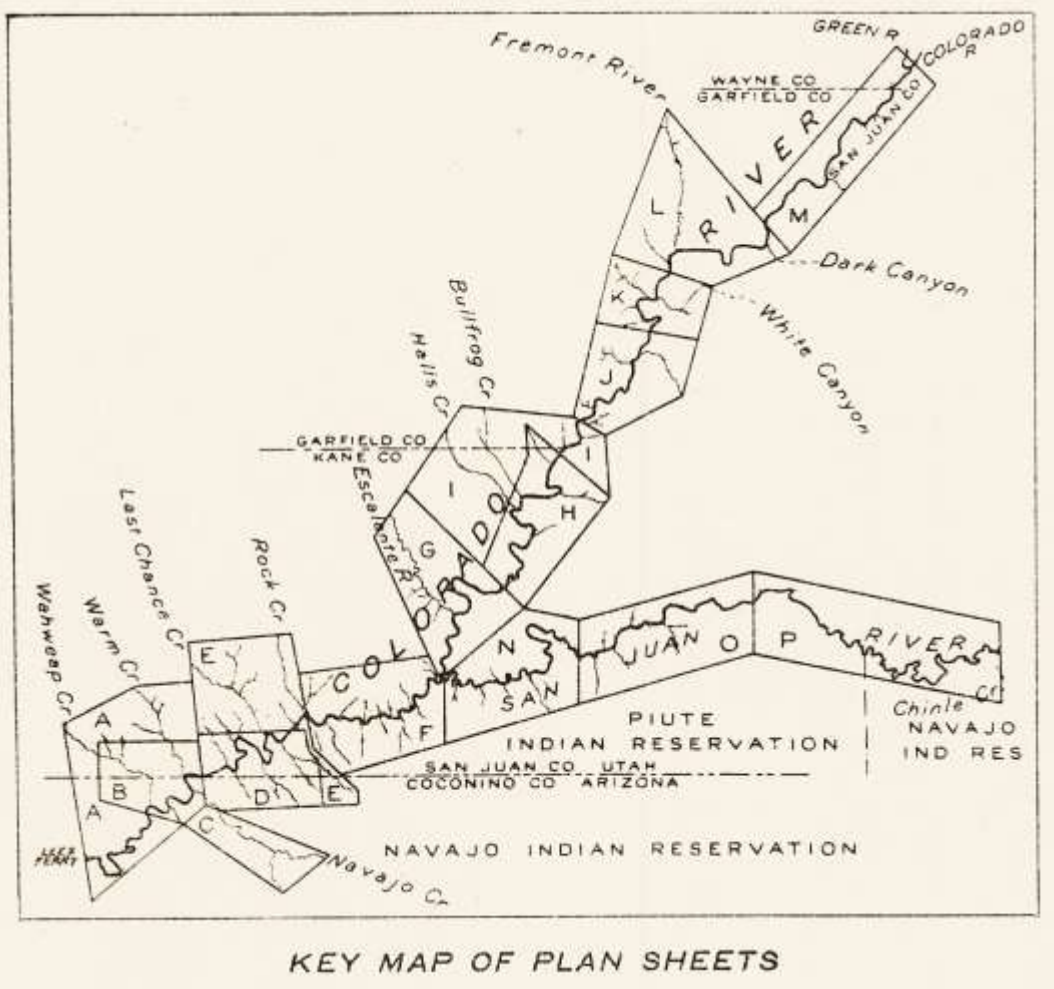
Birdseye, Claude H., AND Gerdine, T. G.

1922 22.1171 *Plan and profile of Colorado River from Lees Ferry, Ariz[.], to mouth of Green River, Utah; San Juan River to mouth of Chinle Creek, Utah; and certain tributaries.* (Topography by A. T. Fowler and V. E. Leech.) U.S. Geological Survey, 22 sheets consisting of 16 plans (maps, sheets A-P, scale 1:31,680; *see key below*) and 6 profiles (sheets Q-V). [Within the geographical bounds of this bibliography, see plan from Lees Ferry to Mile −15 on sheets A and B (contour interval 20 feet, contour interval on river surface 5 feet); corresponding profile on sheet Q, vertical scale 1 inch = 20 feet). C. H. Birdseye, Chief Topographic Engineer; T. G. Gerdine, Division Topographic Engineer; topography by A. T. Fowler and V. E. Leech; surveyed 1921.] [Full set displays Colorado River Miles 0 to −216, and San Juan River Miles 0-133. Mileage on Colorado River measured upstream from USGS concrete gage well opposite mouth of Paria River; usually by convention indicated as negative numbers.] [Regarding Mile 0, see in notes to Part 22 herein.]



PART 22. HYDRAULICS AND HYDROGEOLOGY OF THE COLORADO RIVER IN LOWER GLEN, MARBLE, AND GRAND CANYONS

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Bracken, Cameron; Rajagopalan, Balaji; AND Prairie, James

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Brandenburg, Frederick H.

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2005 22.591 Using an integrated, remote-sensing methodology to evaluate the effects of dam operations on fine-grained sediment storage and sand bar restoration in the eastern Grand Canyon [ABSTRACT]. *In: Colorado River Ecosystem Science Symposium 2005. Abstracts. October 25-27, 2005, Fiesta Inn Resort, 2100 South Priest Drive, Tempe, AZ.* [Flagstaff, Arizona]: [U.S. Geological Survey, Grand Canyon Monitoring and Research Center], p. 51.

2005 22.915 Using an integrated, remote-sensing methodology to evaluate the effects of dam operations on fine-grained sediment storage and sand bar restoration in Marble Canyon [ABSTRACT]. *Eos* (American Geophysical Union, Transactions), 86(52, Fall Meeting Supplement), Abstract H53B-0470.

Bridenbecker, Bruce, AND Stewart, Allen

1991 22.1180 Sedimentary structures in failed and nonfailed beaches and bars of the Colorado River in the Grand Canyon. *In: Colorado River Investigations #9 : July/August, 1990* (supervised by Stanley S. Beus, Lawrence E. Stevens, and Frank B. Lojko). Flagstaff, Arizona: Northern Arizona University, *for* U.S. National Park Service, Grand Canyon National Park, pp. 123-140.

Brod, Chris, AND Mathews, Jim

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Brouder, Mark J.

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1997 22.1000 Changes in the number, morphology, and sediment composition of backwaters and their recovery in the Colorado River, Grand Canyon, following the 1996 experimental habitat/beach building flood. *American Fisheries Society, 127th Annual Meeting, "Fisheries at Interfaces: Habitats, Disciplines, Cultures", 24-28 August 1997, Monterey, California, Abstracts: A-K*, p. 24.

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Brower, David R.

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Brown, David, AND Reeder, Ben

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2005 22.592 3D laser scanning (LiDAR surveying) and oblique photogrammetry assessment during the 2004 high flow test [ABSTRACT]. *In: Colorado River Ecosystem Science Symposium 2005. Abstracts. October 25-27, 2005, Fiesta Inn Resort, 2100 South Priest Drive, Tempe, AZ.* [Flagstaff, Arizona]: [U.S. Geological Survey, Grand Canyon Monitoring and Research Center], p. 52.

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Budhu, Muniram

NO DATE 22.57 Mechanisms of erosion and a model to predict seepage-driven erosion due to transient flow. *In:* Beus, Stanley S., and Avery, C. C. (compilers), *The influence of variable discharge regimes on Colorado River sand bars below Glen Canyon Dam: Draft final report.* Northern Arizona University, Chapter 2 (75 pp., separately paginated). [1992.]

Budhu, Muniram, AND Contractor, D. N.

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1995 22.62 Seepage-induced slope failures on sandbars in Grand Canyon. *Journal of Hydraulic Engineering*, 121(8) (August): 601-609.

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Buishand, T. A.

1984 22.65 Tests for detecting a shift in the mean of hydrological time series. *Journal of Hydrology*, 73(1/2) (July): 51-69.

Bull, William B.

2007 22.950 *Tectonic geomorphology of mountains: A new approach to paleoseismology.* Malden (Massachusetts), Oxford (United Kingdom), and Carlton (Victoria, Australia), 316 pp. [Colorado River in Grand Canyon, see pp. 4-5, 53-54, 66.]

Burfield, Cynthia L. [Burfield, Cindy]

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Burfield, Cindy, AND Thompson, Kelcy

1991 22.66 Beach failure. *In: Colorado River Investigations #9 : July/August, 1990* (supervised by Stanley S. Beus, Lawrence E. Stevens, and Frank B. Lojko). Flagstaff, Arizona: Northern Arizona University, *for* U.S. National Park Service, Grand Canyon National Park, pp. 51-61.

Burkham, Durl E.

1986 22.68 Trends in selected hydraulic variables for the Colorado River at Lees Ferry and near Grand Canyon, Arizona—1922-1984. *Glen Canyon Environmental Studies report GCES/07/87 : National Technological Information Service accession no. PB88-216098*, 58 [65] pp. [Based on the Lees Ferry and Phantom Ranch gages.]
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1987 22.1072 *Review of USBR/USGS sediment-transport and beach-erosion reports—Glen Canyon Environmental Studies.* [No place]: U.S. National Park Service, *for* Glen Canyon Environmental Studies, 46 pp. [U.S. Bureau of Reclamation, U.S. Geological Survey.]

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NO DATE 22.1225 **解决沈积问题之匙 : 维护生态平衡, 持久不息** [Jiějué chén jī wèntí zhī shi : wéihù shēngtài pínghéng, chíjiǔ bù xī] [The key to solving deposition problems : maintain the ecological balance for a long time]. Duisburg, Germany: DB Sediments, [6] pp. [including wraps]. [See p. [3], reference to **「大峡谷现象」** ["dà xiágǔ xiànxiàng"] ["Grand Canyon Phenomenon"], which refers to the effects of sediment-poor discharge to rivers downstream from dams. See p. [4], photos of jet tubes in

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