

BSDMS Summary Report

9 Red River at I-30 near Fulton, AR

Site Location:

Site ID: 9

Site Name: Red River at I-30 near Fulton, AR

County: Miller, Hempstead

Nearest City: Fulton

State: AR

Latitude: 333626

Longitude: 934849

USGS Station ID: 7341500

Route Number: 30

Route Class: Interstate

Service Level: Mainline

Route Direction: NA

Highway Mile Point:

Stream Name: Red River

River Mile:

Contact:
U.S. Geological Survey - Arkansas
District
2301 Federal Office Building
700 West Capitol Bldg.
Little Rock, Ark. 72201

Publication:
U.S. Geological Survey
Water Resources Investigations
Report 92-4126
"Scour around bridge piers on
streams in Arkansas"
by Rodney Southard

Site Description:

This site is located at the I-30 bridge crossing the Red River near Fulton, Arkansas, near the border with Texas. The site is in the Coastal Plain Province, which is underlain by alluvial deposits and other unconsolidated sediments. The channel bed consists primarily of fine sands, silts, and clays.

Elevation Reference

Datum: MSL

MSL (ft):

Description of Reference Elevation:

Structure elevations entered are from the bridge construction plans.

Stream Data

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Drainage Area (sq mi):	52336	Floodplain Width:	Unknown
Slope in Vicinity(ft/ft):		Natural Levees:	Unknown
Flow Impact:	Unknown	Apparent Incision:	Unknown
Channel Evolution	Unknown	Channel Boundary:	Unknown
Armoring:	Unknown	Banks Tree Cover:	Unknown
Debris Frequency:	Unknown	Sinuosity:	Unknown
Debris Effect:	Unknown	Braiding:	Unknown
Stream Size:	Unknown	Anabranching:	Unknown
Flow Habit:	Unknown	Bars:	Unknown
Bed Material:	Unknown	Stream Width Variability:	Unknown
Valley Setting:	Unknown		

Roughness Data

Manning's n Values

	Left Overbank	Channel	Right Overbank
High:			
Typical			
Low:			

Bed Material

Bridge Data

Structure No:	3981
Length(ft):	1294.5
Width(ft):	63

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Number of Spans: 9

Vertical Configuration: Curvilinear

Low Chord Elev (ft): 264

Upper Chord Elev (ft): 275

Overtopping Elev (ft):

Skew (degrees): 0

Guide Banks: Unknown

Waterway Classification: Main

Year Built:

Avg Daily Traffic:

Plans on File: Yes

Parallel Bridges No

Upstream/Downstream: N/A

Continuous Abutment: No

Distance Between Centerlines:

Distance Between Pier Faces:

Bridge Description:

The bridge, 1294 ft long and 63 ft wide, is supported by eight reinforced-concrete piers. Piers 4 and 5, numbered from left abutment (looking downstream), have scour measurements entered here.

Abutment Data

Left Station: 67697.21

Right Station: 66402.74

Left Skew (deg): 0

Right Skew (deg) 0

Left Abutment Length (ft): 70

Right Abutment Length (ft) 70

Left Abutment to Channel Bank (ft): 70

Right Abutment to Channel Bank (ft): 480

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Left Abutment Protection:

Right Abutment Protection

Contracted Opening Type: III

Embankment Skew (deg): 0

Embankment Slope (ft/ft): 3

Abutment Slope (ft/ft): 2

Wingwalls: No

Wingwall Angle (deg): 0

Pier Data

Pier ID	Bridge Station(ft)	Alignment	Highway Station	PierType	# Of Piles	Pile Spacing(ft)
4	549	0	67154	Unknown	0	
5	756	0	66946	Unknown	0	

Pier ID	Pier Width(ft)	Pier Shape	Shape Factor	Length(ft)	Protection	Foundation
4	7	Sharp			Unknown	Unknown
5	6.5	Sharp			Unknown	Unknown

Pier ID	Top Elevation(ft)	Bottom Elevation(ft)	Foot or Pile Cap Width(ft)	Cap Shape	Pile Tip Elevation(ft)
4		199.49		Unknown	
5		199.67		Unknown	

Pier Description

Pier ID	4
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ContractionScour

Stage and Discharge Data

Peak Discharge					Flow	Peak Stage					Stage	Water	Return	
year	mo	dy	hr	mi	(cfs)	Qacc	year	mo	dy	hr	mi	(ft)	Temp (C)	Period(yr)
1990	5	12	14:00	0	257000	1000	1990	5	12	14:00	0	255		

Hydrograph

Hydrograph							Discharge	
Number	Year	Month	Day	Hr	Min	Sec	Stage(ft)	(cfs)

Supporting Files
