

RECEIVED  
SURVEY DIVISION

SURVEY DIVISION	
RLS	11-15-73
REC	3/5/74
GWP	
ROE	
JPA	3-5-74
AWZ	11-13-73
GWR	
RD	
SDD	
IS	

# Oklahoma State Highway Dept.

Date October 25, 1973

To Mr Richard L Shephard, Survey Engineer

From L E Higginbotham, Location Engineer

Subject Highwater Report

This information compiled at the request of Project Engineer A W Ziegelgruber.

Apparent rainfall Wednesday afternoon and night Oct. 10, 1973 and early Thursday morning Oct. 11, 1973 of 15" / in the southern watershed, 10" / in the northern watershed along with 5" / in the western watershed created record flood conditions on the Salt Fork of the Arkansas River. The flood area begins at the western edge of Grant County and extends east to the Arkansas River where the Salt Fork empties into it. At this point the Arkansas River basin contained most of the flood water but still rose to almost record level at Ralston.

At three points in the Salt Fork basin a comparison to previous flood (1923) record, at Jefferson and Pond Creek, Lamont, and Tonkawa this flood was 2.5' over recorded highwater marks.

Many county roads are washed out, bridges destroyed or damaged to varying degree. The Grant County commissioner and road crews will be a year repairing all areas.

The Oklahoma Highway Department suffered major damage to I-35, lesser damage to US 177 but still causing closure due to washouts. Other highways in area US 60, 64, 77, SH 11, 74 and 156 all sustained minor damage.

Even at this extensive amount of road and highway damage the personal property losses have been much heavier. Many homes and improvement, fences and fields are covered with silt and debris, in other areas these are washed away, taking all topsoil. Many animals and crops were lost due to drowning and mud. Some ranchers will be forced to sell livestock because of loss of winter pastures or will have to begin feeding. Small grains can be replanted but winter pastures cannot grow enough to sustain cattle before frost. Construction material, barb wire, grain seed, hay and other items will be in short supply temporarily.

In conjunction with this letter 77 3D Form No. 16 are being submitted showing highwater check points throughout Grant, Kay, Noble, Osage and Pawnee Counties.

*Leroy E. Higginbotham*  
 Leroy E Higginbotham  
 Location Engineer

4 COPIES { Grant Co File  
 KAY  
 NOBLE  
 OSAGE  
 PAWNEE

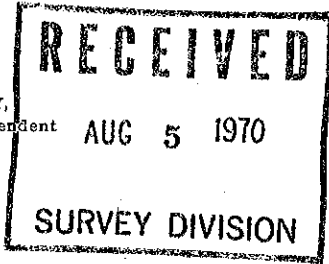
# The Atchison, Topeka and Santa Fe Railway Company

PLAINS DIVISION

OFFICE OF SUPERINTENDENT

Amarillo, Texas 79101

K. C. MAY,  
Superintendent



July 30, 1970

63

SURVEY DIVISION	
GHS	
WWV	
RLS	
GWP	
OCC	
RCC	
✓ GP	8-26-70
SDD	
RDA	
DP	
IF	

Mr. Gaines H. Stout, Survey Engineer  
State of Oklahoma, Department of Highways  
Jim Thorpe Building  
Oklahoma City, Oklahoma 73105

Attention: Mr. Oscar C. Curnutt  
Ground Survey Engineer

Gentlemen:

Your letter June 2, 1970, requesting high water information on the Chickaskia River between Blackwell, Oklahoma, and the Oklahoma-Kansas state line.

The water level was as shown below on the dates listed.

Bridge 30.7 **LOCATED APPROXIMATELY 3 MILES NORTH OF BLACKWELL**

9-06-20	5.1 ft. below base of rail
6-08-23	0.4 ft. below base of rail
7-30-06	3.5 ft. below base of rail
6-19-08	To bottom of caps
8-20-20	5.1 ft. below base of rail
10-03-26	2.9 ft. below base of rail
9-30-27	1.6 ft. below base of rail
7-12-51	4.5 ft. below base of rail

Bridge 33.1 **LOCATED APPROXIMATELY 0.5 MILES NORTH OF BLACKWELL**

6-08-23	0.2 ft. above base of rail
7-30-06	4.5 ft. below base of rail
June 1908	Water to bottom of caps
5-06-18	8.8 ft. below base of rail
8-20-20	8.5 ft. below base of rail
4-09-22	11.0 ft. below base of rail
10-03-26	1.8 ft. below base of rail
4-03-27	3.0 ft. below base of rail
4-08-27	3.0 ft. below base of rail

This data is from our records maintained in the normal course of our business, and any or all of the high water observations have not

**FILE: KAY COUNTY FLOOD & HIGH WATER ✓**  
**MC: AT & SF RR FILE**

been classified as to discharge or frequency of discharge and/or reason for the discharge such as upstream or downstream control, direct runoff, backwater, debris restriction, other obstructions, etc.

It should be understood that the above information is strictly confidential and is being furnished as a cooperative service, and the data should not be released as public information or to any other person than the Highway Department without consent of the Railway Company.

Yours very truly,

A handwritten signature in cursive script, appearing to read "L. May". The signature is written in dark ink and is positioned below the typed closing "Yours very truly,".

## Oklahoma State Highway Dept.

Date April 28, 1970

To Mr. Gaines H. Stout

From Charles I. Hillis

Subject Highwater on Future US 60 &amp; Present US 60 East of Tonkawa.

- 17A 1. Highwater Elev. 957.88 from visible drift on centerline Sta. 300 + 00 west side of Chikaskia River on SWO 2323(1) Future US 60 Kay Co. Occurred 4-19-70.
- 17A 2. Highwater Elev. 958.28 from visible drift on centerline Sta. 306 + 76 east side of Chikaskia River on SWO 2323(1) Future US 60 Kay County. Occurred 4-19-70.
- 17 3. Highwater 10.2 below bridge floor, west end bridge, obtained from actual observation of highwater by this Survey Party, 13' south and 8' east of the SW cor. of Chikaskia River bridge on Present US 60 approximately 2 miles east of Tonkawa. Occurred 4-19-70.
- 17 4. Highwater 8.3 below bridge floor, west end bridge, obtained from actual observation of highwater by this Survey Party, 9' north and 13' east of the NW cor. of the Chikaskia River Bridge on Present US 60, approximately 2 miles east of Tonkawa. Occurred 4-19-70.
- 17 5. Highwater 10.7 below bridge floor, west end bridge, obtained from actual observation of highwater by this Survey Party, 25' north and 5' west of the NE cor. of the Chikaskia River Bridge on Present US 60, approximately 2 miles east of Tonkawa. Occurred 4-19-70.
- 17 6. Highwater 11.0 below bridge floor, west end bridge, obtained from actual observation of highwater by this Survey Party, 22' south and 2' east of the SE cor. of the Chikaskia River Bridge on Present US 60, approximately 2 miles east of Tonkawa. Occurred 4-19-70.
- 17 7. Highwater 10.7 below bridge floor, west end bridge, obtained from actual observation of highwater by this Survey Party on centerline of paving 2322' east of the east end of Chikaskia River Bridge on Present US 60, approximately 2 miles east of Tonkawa. Occurred 4-19-70.
- 9 8. Highwater 3.2 below bridge floor of Duck Creek Overflow Bridge on Present US 60, obtained from well defined water marks and drift on centerline of paving 357' west of the west end of Duck Creek Overflow Bridge. Occurred 4-19-70. NOTE: US 60 was under water from 357' west of Duck Creek Overflow Bridge west to 2322' east of the Chikaskia River Bridge. *ELEV: 956.9*
- 9 9. Highwater 2.8 below bridge floor of Duck Creek Overflow Bridge on Present US 60, obtained from well defined water marks and visible drift on centerline of paving 260' east of the east end of Duck Creek Overflow Bridge. Occurred 4-19-70. *ELEV = 957.3*
- 9 10. Highwater 3.6 below bridge floor of Duck Creek Bridge on Present US 60, obtained from well defined water marks and drift on centerline of paving 257' west of the west end of Duck Creek Bridge. Occurred 4-19-70. *ELEV = 956.5*

## Oklahoma State Highway Dept.

Date

To

From

PAGE 2

Subject Highwater on Future US 60 &amp; Present US 60 East of Tonkawa.

11. Highwater 4.3 below bridge floor of Duck Creek Bridge on Present US 60, obtained from well defined water marks and visible drift on centerline of paving 238' east of the east end of Duck Creek Bridge. Occurred 4-19-70. *ELEV=958.3*
12. Highwater 4.3 below bridge floor of Duck Creek Bridge on Present US 60, obtained from well defined water marks and visible drift on centerline of paving 462' east of the east end on Duck Creek Bridge. Occurred 4-19-70. *ELEV=958.3*
13. Highwater Elev. 960.45 from visible drift on centerline Sta. 389 + 29, west side of Duck Creek on SWO 2323(1) Future US 60 Kay County. Occurred 4-19-70.
14. Highwater Elev. 960.65 from visible drift on centerline Sta. 390 + 66, east side Duck Creek on SWO 2323(1) Future US 60 Kay Co. Occurred 4-19-70.

Charles I. Hillis  
Location Engineer

By Luther E. Tackett  
Luther E. Tackett  
Associate Engineer

## Oklahoma State Highway Dept.

Date April 27, 1970

To Mr. Gaines H. Stout

From Charles I. Hillis

Subject Highwater on Salt Fork of Arkansas River &amp; US 77 South Edge of Tonkawa

1. Highwater 10.3 below bridge floor, south end of bridge located 15' north and 5' east of the SE cor. of bridge. Occurred 4-20-70.
2. Highwater 9.8 below bridge floor, south end of bridge located 25' north and 5' west of the SW cor. of bridge. Occurred 4-20-70.
3. Highwater 9.8 below bridge floor north end of bridge located 25' south and 5' west of the NW cor. of bridge. Occurred 4-20-70.
4. Highwater 10.0 below bridge floor, north end of bridge located 35' south and 5' east of the NE cor. of bridge. Occurred 4-20-70.
5. Highwater as gaged by Mr. Don Hoover, Tonkawa City Police Department and US Weather Bureau at Gage Station located on the downstream side of Salt Fork of Arkansas River Bridge, South edge of Tonkawa on US 77. River crested at 20.14 feet at 6:45PM April 20, 1970. Elevation of gage is 930.22 / 20.14 or highwater Elevation equals 950.36 feet Mean Sea Level (USC&GS). This highwater was observed by this Survey Party on 4-20-70.

Charles I. Hillis  
Location Engineer

By Luther E. Tackett  
Luther E. Tackett  
Associate Engineer

Location No. 5A

# Oklahoma State Highway Dept.

Date

To

From

Subject

PAGE 2

Highwater on SH 11 & Future SH 11 Kay Co. East of Blackwell

13 10. Highwater Elev. 1002.04 from visible drift located 12' south & 14' east of the SE cor. of New Culvt. on Lost Creek, North Lane Future SH 11 & Highwater Elev. 1001.74 from visible drift located 6' north of the NE cor. of New Culvt. on Lost Creek, North Lane Future SH 11 & Highwater Elev. 1002.24 from visible drift located 12' west and 11' north of the NW cor. of New Culvt on Lost Creek, North Lane Future SH 11 & Highwater Elev. 1002.14 from visible drift located 10' south and 9' east of the SW cor. of New Culvt. on Lost Creek, North Lane Future SH 11 & Highwater Elev. 1004.0 observed by K.G. Schardien, Kay County Maintenance Foreman, Oklahoma State Highway Department. He stated the highwater was 1.7 ft. above the bridge floor on the present bridge on Lost Creek on present SH 11 approx. 2 miles east of Blackwell. Occurred 4-19-70.

33 11. Highwater on SH 11 at Duck Creek Bridge. Observed by K.G. Schardien, Kay County Maintenance Foreman, Oklahoma State Highway Department. He Stated the water was 1.0 ft. above the bridge floor. Occurred 4-19-70.

32 12. Highwater on SH 11 at Bois D'Arc Creek Bridge. Observed By K.G. Schardien, Kay County Maintenance Foreman, Oklahoma State Highway Department. He stated highwater was 2 inches below the bridge floor. Occurred 4-19-70.

US Weather Bureau Gaging Station located on the south side of AT & SF RR. Bridge located approx.  $\frac{1}{4}$  mile downstream from Future SH 11 Elev. = 967.41

Flood Stage	-----26.00-----	Elev.	993.41
June, 1923	-----34.00-----	"	1001.41
May 18, 1957	-----32.56-----	"	999.97
June, 1957	-----30.20-----	"	997.61
Nov. 17, 1964	-----33.08-----	"	1000.49
June 25, 1969	-----30.50-----	"	997.91
April 19, 1970	-----32.00-----		999.41

Charles I. Hillis  
Location Engineer

By \_\_\_\_\_  
Luther E. Tackett  
Associate Engineer

## Oklahoma State Highway Dept.

Date April 27, 1970

To Mr. Gaines H. Stout

From Charles I. Hillis

Subject Highwater on SH 11 & Future SH 11 Kay Co. East of Blackwell

1. Highwater Elev. 1003.35 from visible drift on centerline of Paving 40' north of the intersection of Main Street and Doolin Ave. in Blackwell. Occurred 4-19-70.
2. Highwater Elev. 1001.69 from visible drift in centerline of dirt road 57' east of the intersection of North "B" Street & Doolin Ave. in Blackwell. Occurred 4-19-70.
3. Highwater Elev. 1001.61 "X" painted yellow on conc. slope wall on visible water mark located 40' north of the NW cor. of Structure No. 2 (North Lane Chikaskia River Bridge) & Highwater Elev. 1001.12 "X" painted yellow on conc. slope wall on visible water mark located 2' south & 26' east of the SW cor. of Structure No. 2 (North Lane Chikaskia River Bridge). & Highwater Elev. 1001.35 "X" painted yellow on conc. slope wall on visible water mark located 1.0' north & 34' west of the NE cor. of Structure No. 2 (North Lane Chikaskia River Bridge) which occurred 4-19-70.
4. Highwater Elev. 1000.76 "X" painted yellow on conc slope wall on visible water mark located 30.5' south of the SW cor. of Structure No. 3 (First Overflow Bridge east of Chikaskia River) & Highwater Elev. 1001.15 "X" painted yellow of conc. slope wall on visible water mark located 42' north of the NW cor. of Structure No. 3 (First Overflow Bridge east of Chikaskia River) which occurred 4-19-70.
5. Highwater Elev. 1001.04 "X" painted yellow on conc. slope wall on visible water mark located 66' north of the NE cor. of Structure No. 4 (RR Overpass). & Highwater Elev. 1000.35 located at base of fence post 62' south of the SE cor. of Structure No. 4 (RR Overpass). Occurred 4-19-70.
6. Highwater Elev. 999.26 "X" painted yellow on conc. slope wall on visible water mark located 36.5' south of the SE cor. of Structure No. 5 (First Overflow Bridge east of RR) & Highwater Elev. 999.53 "X" painted yellow on conc. slope wall on visible water mark located 36.5' north of the NE cor. of Structure No. 5 (First Overflow Bridge east of RR). Occurred 4-19-70.
7. Highwater Elev. 999.33 from visible drift 6' south of the SE cor. of garage at residence of Mr. E.H. Green approx. 440' left or north of Sta. 314 + 00 North Lane Future SH 11. Occurred 4-19-70.
8. Highwater Elev. 998.95 "X" painted yellow on conc. slope wall on visible water mark located 26' south of the SW cor. of Structure No. 7 (Second Overflow Bridge east of RR) & Highwater Elev. 999.00 "X" painted yellow on conc. slope wall on water mark located 29' north of the NW cor. of Structure No. 7 (Second Overflow Bridge east of RR). Occurred 4-19-70.
9. Highwater Elev. 997.51 "X" painted yellow on conc. slope wall on visible water mark located 37' south of the SE cor. of Structure No. 9 (Third Overflow bridge east of RR) & Highwater Elev. 997.48 "X" painted yellow on conc. slope wall on visible water mark located 28' north of the NE Cor. of Structure No. 9 (Third Overflow Bridge east of RR). Occurred 4-19-70.



# Oklahoma State Highway Dept.

Date April 28, 1970

To Mr. Gaines H. Stout

From Charles I. Hillis

Subject Highwater on Bois D'Arc Creek on Old US 60 & New US 60  
East of Ponca City:

1. Highwater Elev. 941.0 obtained from visible drift, 10' south and 11' west of the SE cor. Bois D'Arc Creek Bridge on old US 60. Occurred 4-19-70.
2. Highwater Elev. 941.67 obtained from visible drift 10' south and 19' east of the SW cor. of Bois D'Arc Creek Bridge on old US 60, Occurred 4-19-70.
3. Highwater Elev. 947.86 obtained from visible drift, 30' west and 15' north of the NW cor. Bois D'Arc Creek Bridge, New US 60, west bound lane. Occurred 4-19-70.
4. Highwater Elev. 947.66 obtained from visible drift, 85' west and 15' north of the NE cor. of Bois D'Arc Creek Bridge, New US 60, west bound land. Occurred 4-19-70.

Charles I. Hillis  
Location Engineer

By Luther E. Tackett  
Luther E. Tackett  
Associate Engineer

Location No. 6 3/6A

## Oklahoma State Highway Dept.

Date April 27, 1970

To Mr. Gaines H. Stout  
From Charles I. Hillis  
Subject Highwater on US 177 & Chikaskia River North side of Blackwell

1. Highwater Elev. 1003.44 at the base of a R/W marker located 50' west and 10' north of the SW cor. of Chikaskia River Bridge. Occurred 4-19-70.
2. Highwater Elev. 1002.44 located at the SE cor. of brick pump house east of the south end of the Chikaskia River Bridge. Occurred 4-19-70.
3. Highwater Elev. 1002.54 "X" painted yellow in centerline of paving on water mark 355' south of the south end of Chikaskia River Bridge. Occurred 4-19-70.
4. Highwater Elev. 1002.22 a well defined water mark on corner fence post located 12' south and 60' east of the north end of Chikaskia River Bridge. Occurred 4-19-70.
5. Highwater Elev. 1002.52 a well defined water mark on power pole located 12' north and 90' west of the north end of Chikaskia River Bridge. Occurred 4-19-70.

Charles I. Hillis  
Location Engineer

By Luther E. Tackett  
Luther E. Tackett  
Associate Engineer

Location No. 11