Lincoln Creek near Seward, Nebraska
0688000

LOCATION

Latitude and Longitude

40.91584, -97.14531

Road Log

From the intersection of State Highway 15 and 34 in Seward NE. the gage is ¾ mile North on Highway 15 and 2 ½ mile West on a county road.

Nearby Features

Approximately 1.2 miles East on Bluff Road is bridge over Big Blue River and few hundred yards further East is railroad crossing.

Equipment Details

Recording Gage

A Sutron Constant Flow bubbler unit connected to the river line in a 1 1/4" galvanized pipe to the pier on the left side of the stream where the orifice is located. Sutron Sat Link 3 unit stores values and transmits on a 60-minute cycle. Shelter is a Corps of Engineers' 5' x 5' steel house set on a steel platform.

External Gage

Wire-weight gage located on downstream side of bridge. Check bar elevation 26.62 feet, gage datum. Levels 05/11/2021.

Bench Mark and Reference Marks

RM's 1, 2, 3, BM 3A, and 4 have been destroyed.

RM 6 is a brass elevation marker on left downstream wing wall set by Nebraska Department of Roads. Gage elevation 25.08 feet. Origin. Levels 05/11/2021.

RM 7 is a brass elevation marker on right downstream wing wall set by Nebraska Department of Roads. Gage elevation 25.10 feet. Levels 05/11/2021.

LAG is a lag bolt embedded on the east side of a utility pole approximately three feet from the ground. The utility pole is located on the left upstream and north side of the bridge. Gage elevation 20.75 feet. Levels 05/11/2021.

RP 8 is a chiseled arrow in the downstream top camber of the handrail located just west of the wire weight near the center of the bridge. Elevation is 27.62 feet. Levels 05/11/2021.

BM1 NEW: a chiseled square placed on the North West corner of the bridge deck PID#LG0002. Gage elevation 25.19 feet by levels 04/13/2017.

BM2 NEW: a chiseled square placed on the South East corner of the bridge deck PID#LG0004. Gage elevation 25.15 feet by levels 04/13/2017.

Original Datum of gage is 1,429.27 feet above mean sea level, datum of 1929.

03/25/2014 Survey was run to establish NAVD88 datum of 1,429.832 feet.

Hydrology

Drainage Area

438 square miles.

Channel and Control

The low water channel is composed of soft silt. Banks are low and sparsely wooded and are subject to overflow during high flows. Channel meanders above and below the gage. There is no section control in the reach. Medium stage control is a sharp bend to the right immediately downstream from the gage. At extreme high stages the stream leaves its banks and floods over a large part of the adjacent farmland on both sides of the main channel. Low flow may be affected by weeds and dead trees in the channel.

Discharge Measurements

At low flow, measurements may be made by wading in the vicinity of the gage. Medium and high water measurements are made from the bridge at the gage. At extreme high stages there will be flow over the road on both sides of the bridge which must be measured by wading. If stages are extremely high, it may be impossible to reach the gage or the bridge to measure and indirect methods will have to be used.

Floods

Extremes for Period of Record

1953-90; Maximum discharge 10,100 cubic feet per second June 17, 1957 (gage height, 20.53 feet); minimum daily, 1.3 cubic feet per second July 31, 1955.

Point of Zero Flow

Varies with scour and fill of channel at gage. 2.00 ft PZF on 09-09-98.

Winter Flow

Ice effect during winter months can be expected. Complete to partial ice cover of floating slush. More than one layer of ice is common in the stream in this reach. Some jamming may occur during ice breakup.

Regulation and Diversions

Significant amount of pump irrigation above the station.

Accuracy

With sufficient measurements to define shifting streambed records should be good except for extreme high flows or periods affected by ice.

Establishment and History

Established November 27, 1953, by the U.S. Geological Survey. No previous record.

Digital recorder installed December 6, 1962, in tandem with A-35 recorder.

A-35 removed December 5, 1968.

Station discontinued September 30, 1973.

Reestablished on March 21, 1974.

On April 14, 1995 the CO-OP Agreement between the USGS and State of Nebraska Department of Water Resources (DWR) ended and the USGS equipment was removed.

Total funding, equipment, and publication was then provided by the DWR. A Fluid Data G-2 manometer, Stevens A-71 strip chart recorder, and Fluid Data Safe-Purge system was install on April 18, 1995.

On July 6, 1995 a Handar shaft encoder and memory box (digital recorder) was added to the station.

On November 22, 1995 a State of Nebraska wire weight was installed on the downstream side of the bridge.

On May 6, 2005 the Handar equipment was removed and new WaterLog recording equipment was installed.

On July 22, 2009 the Fluid Data G-2 manometer, A-71 Stevens strip chart recorder (1-6 scale), WaterLog shaft encoder, and the Fluid Data Safe purge gas system was removed from service.

On the same day, new WaterLog Data Collection Platform unit was installed. New equipment is capable of storing the values and transmitting them on a 60-minute cycle. There is a OTT CBS unit self-contained bubbler system and transducer connected to the river line in a 1 1/4" galvanized pipe to the pier where the orifice is located.

On August 17, 2022 we installed new gauge equipment. A Sutron SatLink3 is connected to a Sutron Constant Flow Bubbler which stores and transmits stage and battery voltage data on a 60 minute cycle.

Revision History

Original description by R. E. Curtis, 07-18-56

Revised by E. K. Steele, Jr., 09-20-66

Revised by G. B. Engel, 07-19-76

Revised by J. A. Anderson, 07-19-85

Revised by J. A. Marburger, 08-15-86

Revised by M. T. Thompson, 03-05-91

Revised by E. E. Solano, 02-03-94

Revised by J. A. Marburger, 02-10-95

Revised by J. A. Marburger, 04-10-95

Revised by J. A. Marburger, 01-23-98

Revised by J. A. Marburger, 12-31-98

Revised by J. A. Marburger, 07-05-01

Revised by J. A. Marburger, 06-30-04

Revised by J. A. Marburger, 06-17-05

Revised by J. A. Marburger, 06-25-07

Revised by J. A. Marburger, 12-28-09

Revised by J. A. Marburger, 09-20-11

Revised by J. A. Marburger, 08-26-15

Revised by J. J. Vifquain, 11-21-17

Revised by J. D. Hladik, 06-24-2021

Revised by S. Figuric, 11-01-2022