



Water-Data Report NE-2005

**06798500 ELKHORN RIVER AT NELIGH, NE**

PLATTE RIVER BASIN

LOCATION.--Lat 42°07'23", long 98°02'37", in NW ¼ SW ¼ sec.20, T.25 N., R.6 W., Antelope County, Hydrologic Unit 10220001, at State Highway 14 bridge, 0.9 mi southwest of Neligh, 1.2 mi downstream from Hail Creek, and 1.5 mi downstream from Antelope Creek.

DRAINAGE AREA.--2,200 mi<sup>2</sup>, of which 1,000 mi<sup>2</sup> probably is noncontributing.

**WATER-DISCHARGE AND HYDRAULIC HEAD DIFFERENCE RECORDS**

REMARKS.--Measurements of streamflow discharge during base flow, and concurrent differences in hydraulic head between stream and alluvial aquifer as measured by potentiomanometer. Hydraulic heads are for specified locations in channel cross section and are from static water level in stream and ground-water level in temporary piezometer set at specified depth below stream bed. Differences computed as stream head minus aquifer head, with negative numbers indicating discharge from aquifer to stream and positive numbers indicating the reverse.

**DISCHARGE MEASUREMENTS  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**

Date	Discharge, in ft <sup>3</sup> /s	Gage height, in ft
May 10, 2005	364	---
Jul 19, 2005	154	---
Sep 20, 2005	132	---

**HYDRAULIC HEAD DIFFERENCES BETWEEN STREAM AND ALLUVIAL AQUIFER  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005**

[lew, left edge of water; rew, right edge of water; negative head differences indicate ground water discharging into stream]

Date	Station location		Cross-section stationing, in feet	Remarks	Piezometer depth below stream bed, in meters	Hydraulic head differences, in millimeters
	Latitude	Longitude				
May 10, 2005			185	lew	---	---
			150		0.6	-2
			130		0.6	-5
			105		0.6	-2
			80		0.6	-6
			50		0.6	-17
			20		0.6	25
			4		---	---
Jul 19, 2005	42°07'22.1"	98°02'37.7"	149	lew	---	---
			135		0.6	-5
			115		0.6	-2
			95		0.6	-8
			75		0.6	-2
			50		0.6	-5
			25		0.6	-7
			0		---	---
Sep 20, 2005	42°07'22.1"	98°02'37.7"	165	lew	---	---
			150		0.6	25
			125		0.6	-6
			100		0.6	21
			75		0.6	3
			50		0.5	36
			25		0.6	-3
			0		---	---
			rew	---	---	