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WATER-TABLE FLUCTUATIONS IN THE  
SPOKANE VALLEY AND CONTIGUOUS AREA  
WASHINGTON-IDAHO

BY

ARTHUR M. PIPER AND GEORGE A. LAROCQUE, JR.

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Prepared in cooperation with the  
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## CONTENTS

	Page
Abstract.....	83
Location and extent of the area.....	85
Nature and scope of the report.....	85
Land forms and geologic features.....	85
Lakes and streams.....	87
Ground water beneath the outwash plains.....	88
Source, occurrence, and movement.....	88
Intake and discharge with respect to the Spokane and Little Spokane Rivers.....	89
Withdrawal from wells.....	90
Water-level fluctuations.....	90
Ground-water levels in observation wells.....	92
Index.....	139

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## ILLUSTRATIONS

---

	Page
PLATE 4. Map of the Spokane Valley and contiguous area, Washington- Idaho, showing location of observation wells and approximate extent of glacial-outwash plains.....	86
5. Fluctuations of the water level in five wells in the Spokane Valley and contiguous area, Washington-Idaho, 1929-38..... In pocket	
6. Fluctuations of the water level in three wells and in the Spokane River in the vicinity of the Spokane municipal pump'ing stations, 1937-38.....	86
7. Fluctuations of the water level in two public-supply wells at Spokane, Wash., 1909-25 and 1927-38..... In pocket	
FIGURE 4. Index map of the State of Washington and part of Idaho, showing location and extent of the area.....	84



# WATER-TABLE FLUCTUATIONS IN THE SPOKANE VALLEY AND CONTIGUOUS AREA, WASHINGTON-IDAHO

BY ARTHUR M. PIPER AND GEORGE A. LA ROCQUE, JR.

## ABSTRACT

The report describes certain ground-water features of the valley plains along the Spokane and Little Spokane Rivers in Washington and of Rathdrum Prairie and contiguous extensive plains that extend northeastward to Lake Pend Oreille and the Pend Oreille River, in Bonner and Kootenai Counties, Idaho. Together these plains cover about 425 square miles. They are largely undrained.

These plains are formed by outwash and some other deposits of glacial origin, which are at least 500 feet thick at many places and which are in large part extremely pervious to water. These deposits contain a large body of unconfined water, which presumably is derived from deep infiltration of rain and melted snow on the plains, percolation from certain of the lakes along the margins of the plains, and percolation from numerous creeks that discharge onto the plains. The catchment area extends into Idaho, far beyond the drainage basin of the Spokane River; and only a minor part of the ground water is derived from that stream. From this catchment area the ground water converges toward the head of the Spokane Valley and then passes westward as underflow to and beyond Spokane. The amount of this underflow is very large, on the average about 1,000 cubic feet a second or 650,000,000 gallons a day.

In the part of the Spokane Valley that is in Washington, ground water is withdrawn for public and industrial supplies and for irrigating about 8,000 acres of land. For all these purposes the average rate of withdrawal is estimated to be about 100 cubic feet a second or about 65,000,000 gallons a day. Also, in the vicinity of Spokane, a considerable part of the underflow is discharged naturally from numerous springs along the Spokane and Little Spokane Rivers. This discharge supplies a major part of the water that flows in the two streams in late summer and autumn and that is then available to operate hydroelectric generators at and below Spokane.

The movement of ground water, just described, is controlled largely by the configuration of the bedrock surface on which the outwash was deposited. This surface is essentially the trunk valley of a preglacial stream, which apparently drained the basin of the present Clark Fork of the Columbia River westward through the present Pend Oreille Lake and Spokane Valley. Thus, the underflow through the outwash is a segment of the regional drainage system but crosses the divide between two principal streams of the present time.

The report includes and interprets in a preliminary fashion about 12,000 measurements of water level in wells in the period ending with 1938. For the years prior to 1938, most of these measurements were made by non-Federal agencies and were made available to the Geological Survey through the Water Division of the city of Spokane and the Washington Water Power Co. These data on ground-water levels are unique for the Pacific Northwest in that they afford continuous records covering 10 years or more for many of the observation wells.

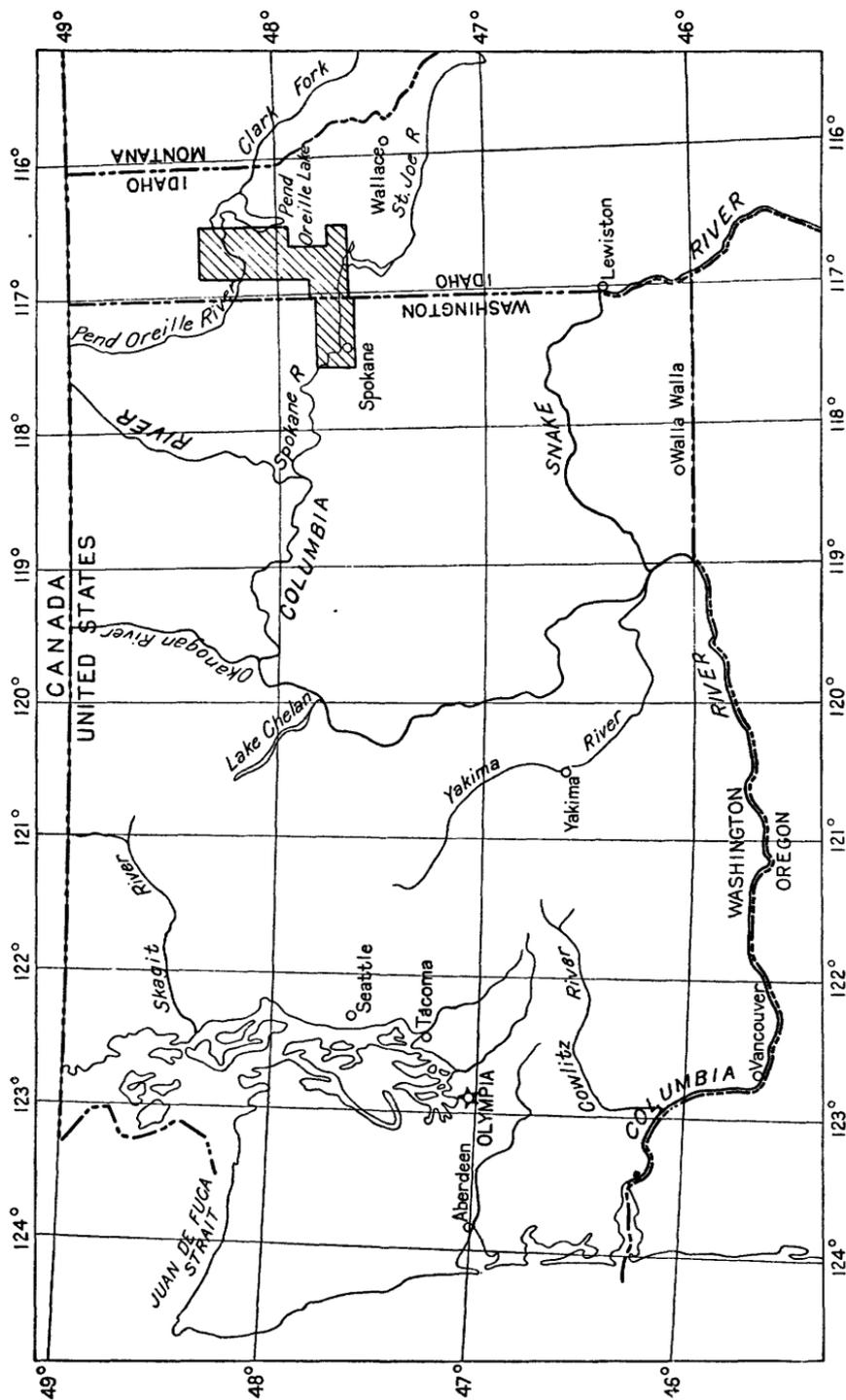


FIGURE 4.—Index map of the State of Washington and part of Idaho, showing location and extent of the area.

## LOCATION AND EXTENT OF THE AREA

The region covered by this report includes about 125 square miles in Spokane County, Wash., in Tps. 25 and 26 N., Rs. 42 to 46 E., and about 300 square miles in Bonner and Kootenai Counties, Idaho, in Tps. 50 to 57 N., Rs. 2 to 6 W. (See fig. 4.) In Washington it includes the valley plains along the Spokane and Little Spokane Rivers; in Idaho it includes Rathdrum Prairie and contiguous extensive plains that extend northward from the Spokane River to the Pend Oreille River.

## NATURE AND SCOPE OF THE REPORT

This report comprises data on fluctuations of water level in observation wells that are widely spaced over the several plains. (See pl. 4.) These data were gathered in connection with an investigation that was begun late in 1937 through cooperation between the Geological Survey, United States Department of the Interior, and the Washington State Department of Conservation and Development. This investigation is intended ultimately to establish approximately the safe ground-water yield of the Spokane Valley in Washington. The data (pp. 93-137) are unique for the Pacific Northwest in that they afford continuous records covering a period of 10 years or more for many of the wells, also in that they show the behavior of a large ground-water body that is an integral part of the regional drainage system.

Most of the water-level measurements were made initially by non-Federal agencies and have been made available to the Geological Survey by the Water Division, city of Spokane, and by the Washington Water Power Co. Beginning in January 1938, water-level measurements have been made periodically by the Geological Survey at 25 observation wells.

The pertinent surface and geologic features of the area, the drainage system of streams and lakes, and the functional relation of the ground-water body to the surface drainage system are described to afford an adequate background for a preliminary analysis of these water-level data.

## LAND FORMS AND GEOLOGIC FEATURES

The Spokane Valley, with whose ground-water resources this report is primarily concerned, is commonly understood to include the lowland plain along the Spokane River for a distance of about 20 miles eastward from Spokane to and a few miles beyond the Washington-Idaho boundary line. This plain is from 2 to 6½ miles wide. It is about 1,900 feet above sea level at Spokane, but it rises uniformly eastward about 10 feet to the mile to an altitude of about 2,100 feet above sea level at the interstate boundary. Still farther east the plain widens into Rathdrum Prairie, which, with contiguous lowland plains, is 6 to

17 miles wide and extends northeastward<sup>1</sup> to the southern arm of Pend Oreille Lake. Tongues of the plain extend even farther northward, to the Pend Oreille River. In altitude these plains range from 2,100 to 2,500 feet above sea level. Certain plains or "prairies" are extensive terraces, bounded by a scarp or scarps as much as 200 feet high.

Near Spokane the lowland plains just described abut sharply against the Columbia Plateau and several of its outliers, such as Fivemile Prairie and Pleasant Prairie. These remnants of the Columbia Plateau are 300 to 400 feet above the Spokane Valley. Farther east the plains abut against smoothly contoured mountain slopes with a local relief as great as 3,700 feet.

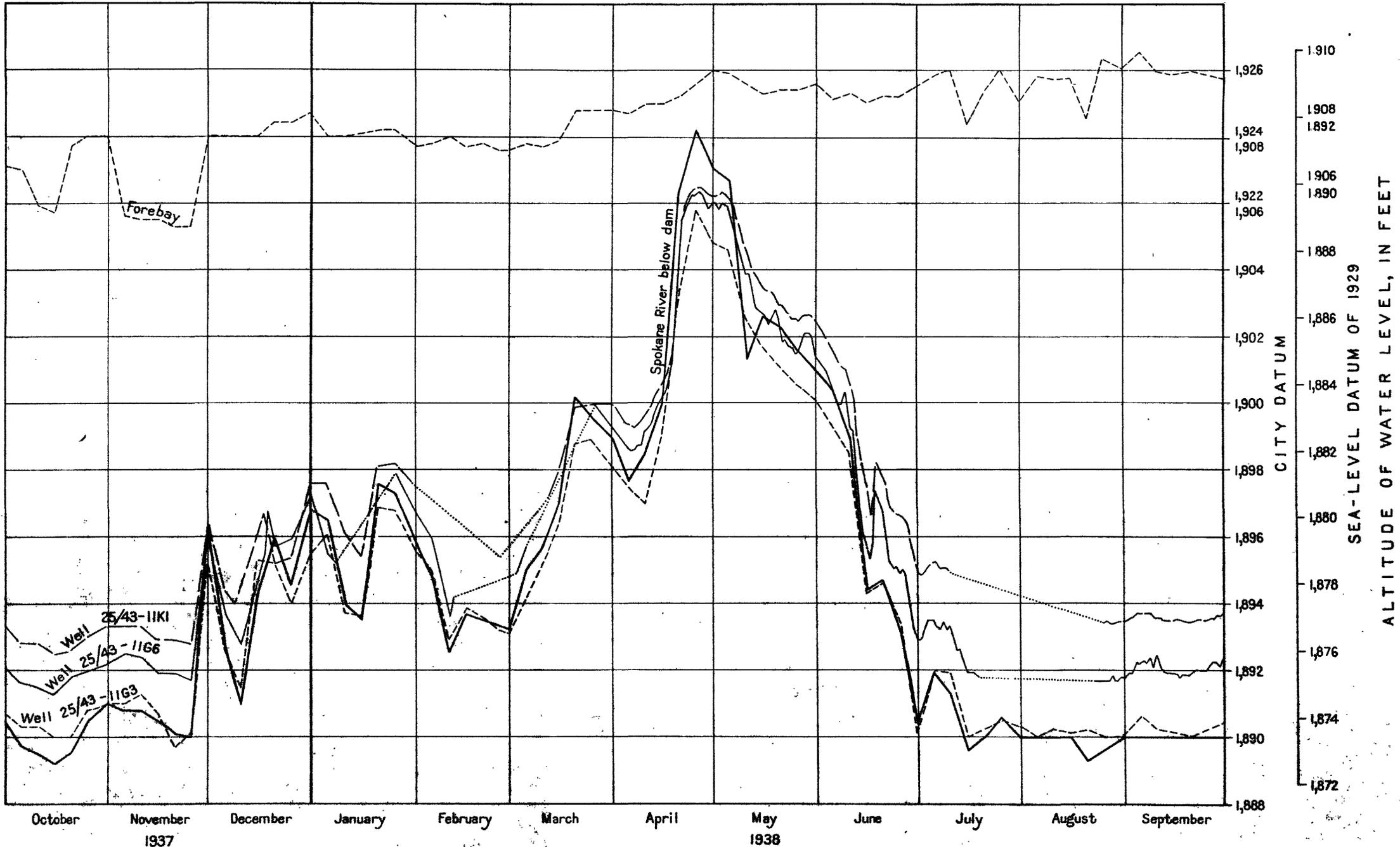
The Spokane Valley, Rathdrum Prairie, and the contiguous plains are underlain by incoherent or loosely coherent gravel and sand, at many places at least 500 feet thick. These deposits are largely the outwash from glaciers that once occupied parts of the area, apparently in two distinct epochs. According to Bretz,<sup>1</sup> in the earlier or Spokane epoch of glaciation, ice advanced from the north, crossed Fivemile and Pleasant Prairies, and at maximum extent reached and extended about 15 miles beyond the site of Spokane. In the later epoch, probably the Wisconsin stage of glaciation, ice advanced from the northeast, covered all the site of Rathdrum Prairie, and extended eastward about to Spokane. During recession, the front of this glacier stood for a considerable time in the southern arm of Pend Oreille Lake. From this front there was transported much of the great volume of outwash that forms the terraced lowland plains in Idaho and the plain of the Spokane Valley in Washington.

In the bedrock surface over which the outwash was spread, rivers and glacier had cut valleys with floors several hundred feet beneath the present lowland plains. In Idaho these older valleys had a pattern somewhat different from that of the present streams.<sup>2</sup> To the west, the bedrock valley that underlies the Spokane Valley plain probably was occupied by a master stream that drained an area far more extensive than that drained by the present Spokane River. The outwash buried all this pre-Wisconsin rock surface under a thick mantle that built up the lowland plains to their present altitude and doubtless obliterated some drainage divides of the bedrock surface.

Beneath the Spokane Valley a very large part of the glacial outwash is composed wholly of cobbles and pebbles, which render it very pervious. High perviousness is also indicated by the extraordinarily large specific capacities of wells that enter the outwash, commonly 1,000 gallons or more a minute for each foot of draw-down. Being several hundred feet thick and at least 2 miles across, the whole tongue

<sup>1</sup> Bretz, J. H., Glacial drainage on the Columbia Plateau: *Geol. Soc. America Bull.*, vol. 34, pp. 573-608, 1923.

<sup>2</sup> Anderson, A. L., Some Miocene and Pleistocene drainage changes in northern Idaho: *Idaho Bur. Mines and Geology, Pamph. 18*, 29 pp., July 1927. [Mimeographed.]



FLUCTUATIONS OF THE WATER LEVEL IN THREE WELLS AND IN THE SPOKANE RIVER IN THE VICINITY OF THE SPOKANE MUNICIPAL PUMPING STATIONS, 1937-38.



of outwash has an extraordinarily large capacity to transmit ground water.

The floor beneath the outwash is composed of rocks such as form the mountains and plateau outliers that enclose the plains. Thus, except near Spokane, that floor is composed almost entirely of the crystalline and metamorphic rocks that are described briefly by Pardee and Bryan<sup>3</sup> as the "granite-schist group." These rocks are essentially impervious. At and near Spokane the floor probably is formed in part by the rocks that underlie the outliers of the Columbia Plateau—sedimentary and volcanic rocks of Tertiary age. These rocks, which are described at length by Pardee and Bryan,<sup>4</sup> are only moderately or slightly pervious.

In summary, the Spokane Valley and contiguous lowland plains are underlain, commonly at a depth of several hundred feet, by an impervious rock floor—part of a pre-Wisconsin valley system that presumably discharged westward by way of the Spokane Valley. The pattern of the pre-Wisconsin valleys is not known precisely, but apparently the Spokane Valley trough received the drainage from an extensive area to the east and northeast, an area much more extensive than that now drained by the Spokane River. The pre-Wisconsin valleys are filled to a depth of several hundred feet by glacial outwash that has an extraordinarily large capacity to transmit ground water. Thus, the pervious fill affords an integrated system of conduits through which ground-water drainage can converge from an extensive intake area in Idaho toward the head of the Spokane Valley and thence pass westward to and beyond Spokane.

### LAKES AND STREAMS

The most striking elements in the drainage system of the area probably are the numerous lakes that occupy depressions along the margins of the outwash plains. These include Liberty and Newman Lakes in Washington and Coeur d'Alene, Pend Oreille, Spirit and other lakes in Idaho. They are random in altitude. All are fed by perennial streams that drain adjacent mountainous terrain, but only the largest two, Pend Oreille and Coeur d'Alene Lakes, have outlet streams. Pend Oreille Lake receives the runoff from an extensive rugged terrain by way of the Clark Fork and discharges into the Pend Oreille River, which formerly was also known as the Clark Fork; this outlet stream passes a few miles north of the area covered in this report. Coeur d'Alene Lake is fed largely by the St. Joe and Coeur d'Alene Rivers. Its outlet, the Spokane River, skirts the south

<sup>3</sup> Pardee, J. T., and Bryan, Kirk, *Geology of the Latah formation in relation to the lavas of the Columbia Plateau near Spokane, Wash.* U. S. Geol. Survey Prof. Paper 140, p. 4, 1928.

<sup>4</sup> *Idem*, pp. 4-15.

margin of Rathdrum Prairie, continues westward to Spokane, and thence courses northwestward to the Columbia River.

For most of the distance between Coeur d'Alene Lake and Spokane, the Spokane River occupies a shallow and somewhat sinuous trench in the outwash plain. In the heart of Spokane, this trench is superposed on a sheet of "valley basalt," over which the river plunges in spectacular falls. Here the floor of the pre-Wisconsin bedrock valley presumably lies a mile or two farther north. Below its falls the river flows in a deep gorge-like but terraced valley commonly known as the gorge or "lower valley" of the Spokane River.<sup>5</sup> The relation of the river to the regional water table is described later.

All the mountainous terrain that encloses the outwash plains is thoroughly drained by numerous perennial creeks. A considerable number of these drain into the lakes that have no outlet streams. The others have no definite channels across the outwash plain and, with one exception, do not flow perennially into the Spokane River above the falls. This exceptional creek drains a relatively small area in the vicinity of Post Falls, where the river flows along the very edge of the outwash plain.

## GROUND WATER BENEATH THE OUTWASH PLAINS

### SOURCE, OCCURRENCE, AND MOVEMENT

The large body of ground water that exists in the outwash gravel presumably has been derived from the three sources indicated below and is intermittently or perennially replenished from them: Deep infiltration of rain and melted snow from the many extensive undrained tracts on the outwash plains; percolation from some of or all the numerous lakes, both those that have outlet streams and those that do not; and percolation from the numerous creeks, both intermittent and perennial, that reach the outwash plain but do not cross it. The proportionate volumes of water derived from these several sources is not shown by data now available. Apparently, little or no ground water is derived permanently from the Spokane River below the Post Falls gaging station.

In the northern part of the area, near Athol, Idaho, a body or possibly several bodies of perched water apparently exist in the outwash. This locality is only a few miles west of the terminal moraine that closes the southern arm of Pend Oreille Lake; thus it is not unlikely that downward percolation is there impeded by a sheet or lentil of impervious till. Possibly other bodies of perched water exist. Otherwise, however, the outwash appears to contain but one main body of ground water that is nowhere confined.

From water-level data now available it is inferred that the regional water table beneath Rathdrum Prairie and the contiguous plains

<sup>5</sup> Pardee, J. T., and Bryan, Kirk, *op. cit.*, p. 3.

farther north is trough-shaped, with flanks that slope downward from both margins of the outwash plains. The bottom of the inferred trough is rather deep, nearly 500 feet beneath the highest terrace of the outwash plain west of Athol (well 53/4W-24D1) <sup>6</sup> and about 200 feet near the interstate boundary (well 51/5W-33D1). Northeastward, up the hydraulic gradient, the bottom of the trough seems to be a prolongation of the water surface in the south arm of Pend Oreille Lake. If the flanks of the trough rise to and prolong the water surfaces of other lakes those flanks must slope rather steeply.

Westward from the interstate boundary the troughlike form of the water table presumably continues, though the slope of either flank must be rather gentle. Also, the depth of the water table below the land surface decreases steadily; at well 25/43-14K1, near the east boundary of Spokane, the depth is about 48 feet.

The water in the glacial outwash presumably moves radially southwestward from the extensive catchment area in Idaho to the head of the Spokane Valley and thence generally westward toward Spokane. In detail, the direction of movement probably is controlled to a large extent by the configuration of the buried rock surface. Because the water table seems to be a prolongation of the south arm of Pend Oreille Lake, it is inferred tentatively that the trunk valley on the buried rock surface and the main thread of ground-water movement extends from that arm of the lake to the head of the Spokane Valley and thence to and beyond Spokane. It is conceivable, but by no means definitely established, that a tributary thread of ground-water movement trends southward from the Pend Oreille River beneath Hoodoo Valley. As explained in the next section of this report, the aggregate rate of westward movement beneath the Spokane Valley is at times more than 1,000 second-feet, or 650,000,000 gallons a day.

#### **INTAKE AND DISCHARGE WITH RESPECT TO THE SPOKANE AND LITTLE SPOKANE RIVERS**

With respect to replenishment of the main body of ground water in the outwash gravel and discharge from it, the Spokane River may be divided into two reaches, an upstream reach that extends from the head of the river at Coeur d'Alene Lake to a point 4 miles west of the interstate boundary and a downstream reach that extends a few miles beyond Spokane. Along the upstream reach, at least below Fost Falls, the river appears to be insulated and higher than the regional water table. Its bed must be essentially watertight, for ordinarily the flow neither increases nor decreases appreciably along the reach, as shown by numerous stream-discharge measurements made by the Geological Survey and the Washington Water Power Co. During freshets the river may lose some water by downward percolation beyond the edges

<sup>6</sup> For explanation of the well numbers used in this report see pp. 92-93.



of its watertight bed; however, this possible loss is too small to have been conclusively shown by stream-discharge measurements. At the lower or western end of this reach the grade of the river intersects the regional water table. Along the downstream reach the river flows in a valley cutting the water table. There its bed is not everywhere watertight, for at low stage numerous springs are exposed along its banks. Thus, this lower reach of the river gains by ground-water discharge, except possibly during freshets. In the aggregate this discharge is considerable; during the late summer and autumn the river commonly gains from 600 to 800 second-feet above the falls at Spokane, as indicated by gaging-station records.

The lower reach of the Little Spokane River is analogous to the downstream reach of the main river, just described. That stream likewise gains commonly by ground-water discharge from numerous springs; an aggregate gain of a few hundred second-feet is estimated from miscellaneous discharge measurements by the Washington Water Power Co. in 1931-32.

Altogether, this natural ground-water discharge in the lower parts of the Spokane and Little Spokane Valleys appears commonly to have been as much or more than 1,000 second-feet during the late summer and autumn. This discharge into the streams contributes a large fraction of the water that is used for the generation of hydroelectric energy at Spokane and farther downstream.

#### WITHDRAWAL FROM WELLS

In the Spokane Valley, within Washington, ground water is withdrawn from wells for public supplies at Spokane and several suburban communities, for numerous industrial plants, and for irrigating about 8,000 acres of land. The withdrawal for all these purposes may well amount to 75,000 acre-feet a year or at the average rate of about 100 second-feet, or about 65,000,000 gallons a day. The maximum rate of withdrawal is estimated to be about 250 second-feet.

#### WATER-LEVEL FLUCTUATIONS

As indicated on plate 5, the ground-water level in the outwash gravel has fluctuated through a moderately wide range over the entire area, commonly from 5 to nearly 20 feet each year. In certain parts of the area—in particular the higher terraced plains in Idaho, the margins of the plain along the Little Spokane River, and probably other districts—the ground-water level has also tended to rise or decline progressively for periods of several years duration. Because the ground water is unconfined, these fluctuations represent commensurate replenishment and depletion of ground-water storage. Each foot of rise or fall of the water level indicates replenishment or deple-

tion, respectively, amounting to about 50,000 acre-feet in the area between the south arm of Pend Oreille Lake and the falls at Spokane. The fluctuations also indicate a moderately large yearly range in the hydraulic gradient along the Spokane Valley. Because the outwash gravel is so highly pervious, this range in gradient indicates an appreciable yearly fluctuation in the rate of underflow to the areas of ground-water discharge near Spokane.

The yearly range of ground-water level appears to be greatest and the high ground-water stage of the year appears to occur earliest near the Spokane River in the area of ground-water discharge (pl. 5, well 25/43-11K1). There the water level commonly is low and fairly steady through the summer and autumn, fluctuates moderately during the winter and early spring, rises sharply to a maximum stage in April or May, and then declines to a low stage by July or August. The hydrographs in plate 6 show that these fluctuations of ground-water level are similar to fluctuations of stage in the Spokane River and that they are primarily a backwater effect of fluctuating river stage. Only intermittently does the river rise so rapidly or stand at a high stage so long that the water-table gradient is reversed and slopes downward from the river. Thus, only for relatively brief periods is ground-water discharge checked, even with water-level fluctuations so large.

Eastward, beyond the area of discharge, the water table attains its highest level progressively later. Beneath the higher terraced plains in Idaho the highest level occurs ordinarily in July or August (pl. 5, well 53/4W-24D1). This eastward lag in the yearly rise of the water table is inferred to be in part a delayed backwater effect of fluctuations in the area of discharge and in part an effect of late infiltration on the higher plains and late runoff to the northern lakes. Owing to the lag, the hydraulic gradient between the higher plains in Idaho and the area of ground-water discharge near Spokane tends to be least in April or May and greatest in July or August. This gradient determines the rate of underflow to and westward along the Spokane Valley. Thus, underflow would tend to be greatest in midsummer, to decline gradually but not greatly through autumn and winter, and then in spring and early summer to diminish sharply to the year's minimum but to increase quite as sharply to the year's maximum.

Northward from the area of discharge (pl. 5, well 26/43-34P1) the yearly rise of the water table lags in similar fashion, but only slightly. There the water table is lower than at Spokane, so that replenishment of ground-water storage probably is accomplished largely by the regional underflow. The slight lag is the travel time for a replenishing ground-water wave that is set up by the rise of water level at Spokane; indirectly, therefore, this lag also is a backwater effect of fluctuating river stage.

At a distance from the area of ground-water discharge near Spokane, there was marked cumulative depletion of ground-water storage in the 3-year period 1929-31; replenishment in 1932-34, due only in part to the record freshet of December 1933; and another period of depletion in 1935-37. A period of cumulative replenishment appears to have begun again with 1938. These periods of cumulative depletion and replenishment have influenced ground-water storage in and near the discharge area only slightly (pl. 5, well 25/43-11K1). There the low water-table stage of the year is fixed by river stage, which ranges little from year to year during the summer periods of low flow.

Plate 7 comprises hydrographs for two public-supply wells at Spokane, which together show water-level fluctuations almost continuously for the 30-year period ending with 1938. These wells are in the area of ground-water discharge. Only minor fluctuations of their water levels are caused by pumping, so that the hydrographs show fairly well the long-term trend in water-table level. They suggest cumulative replenishment of ground-water storage during the 5-year period 1913-17, cumulative though not steady depletion from 1918 through 1924, and marked replenishment in 1926 and 1927. During these periods the range of water-table level in outlying parts of the area may well have surpassed the range that is shown by plate 5, which covers only the last decade.

#### GROUND-WATER LEVELS IN OBSERVATION WELLS

The report includes and interprets in a preliminary fashion about 12,000 measurements of water level in wells in the period ending with 1938. As has been stated, most of the following data on ground-water level have been contributed by non-Federal agencies. The scope of the data collected by the several agencies is as follows: (1) Water Division, city of Spokane, water-level measurements at seven wells beginning as early as 1908; (2) Washington Water Power Co., measurements at six wells in November 1920 and continuously since 1928, at eight additional wells continuously since 1928, and at four wells beginning in 1930 or subsequently; (3) Great Northern Railway Co., through the Washington Water Power Co., measurements at its Hill-yards shop well, beginning in 1928; and (4) Modern Electric Water Co., also through the Washington Water Power Co., measurements at two wells discontinuously from 1912 to 1929.

The field numbers used in this report show the location of wells according to the official rectangular system for sub-division of the

public land. For example, in the well number 53/4W-24D1 the part preceding the hyphen indicates township and range, T. 53 N., R. 4 W; the one or two digits immediately following the hyphen indicate the section; the letter following indicates the 40-acre subdivision of the section, as shown in the accompanying diagram; and the final digit indicates the serial number of the well within that 40-acre tract. Thus,

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

well 24D1 is in the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 24 and is the first well listed in that tract. Locations in Idaho are with reference to the Boise base line and meridian, in Tps. 50-57 N., Rs. 2-6 W.; those in Washington are with reference to the Willamette base line and meridian, in Tps. 25 and 26 N., Rs. 42-46 E.

**Well 25/42-13B1 (Washington Water Power Co. No. 90)**

**OWNER.**—Empire Ice & Shingle Co., Spokane, Wash.

**LOCATION.**—In the NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 13, T. 25 N., R. 42 E., approximately 90 feet south and 200 feet west from center of intersection of Sinto Avenue and Oak Street, Spokane, Wash.

**DESCRIPTION.**—Industrial dug well, 200 feet deep and 3.5 feet in diameter, open-bottom concrete-tile casing. Turbine pump with 30-horsepower motor.

**MEASURING POINT.**—Top of 4- by 12-inch I-beam pump support, which is level with concrete pump platform, 3.0 feet above top of concrete curb and land surface; 1,886.37 feet above sea-level datum of 1929.

**BENCH MARK.**—About 5 feet north and 40 feet east of well, in concrete sill of engine-room door, a copper nail with washer; 1,901.72 feet above city datum and 1,885.16 feet above sea-level datum of 1929.

**WATER LEVELS.**—First measured November 25, 1930. Lowest and highest levels yet recorded (both pumping levels), August 28, 1931, and January 24, 1934, respectively; range, 15.04 feet. Draw-down probably not more than 1 foot.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,669.53 feet above city datum and 1,652.97 feet above sea-level datum of 1929.

## Water levels in well 25/42-13B1 (Washington Water Power Co. No. 90)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1930</i>		<i>1932—Con.</i>		<i>1935</i>		<i>1937—Con.</i>	
Nov. 25.....	37.77	May 24.....	1 51.62	Jan. 17.....	43.10	July 6.....	1 43.60
Dec. 24.....	37.53	July 16.....	1 43.27	Mar. 15.....	43.40	Sep. 7.....	1 39.55
		Nov. 28.....	42.05	Apr. 29.....	1 46.93	Nov. 9.....	1 38.60
<i>1931</i>		<i>1933</i>		June 27.....	46.62	Dec. 21.....	41.67
Feb. 7.....	37.31			Aug. 16.....	1 40.12	<i>1938</i>	
Mar. 5.....	38.40	Mar. 18.....	41.90	Oct. 2.....	40.70	Jan. 22.....	42.35
24.....	40.45	May 4.....	1 47.07	Nov. 18.....	1 38.40	Mar. 18.....	1 42.72
Apr. 30.....	1 43.32	June 14.....	1 49.48	Dec. 30.....	1 37.20	Apr. 12.....	1 44.10
May 28.....	1 43.23	July 18.....	1 44.63	<i>1936</i>		Apr. 27.....	1 47.79
June 30.....	1 39.85	Aug. 28.....	1 39.53	Feb. 25.....	39.87	May 13.....	1 48.44
July 29.....	1 37.30	Oct. 11.....	39.65	Apr. 30.....	1 48.29	June 8.....	1 47.32
Aug. 28.....	1 36.85	Nov. 27.....	42.37	June 23.....	1 45.45	June 30.....	1 44.04
Oct. 13.....	38.10	<i>1934</i>		Aug. 20.....	1 39.74	July 13.....	1 42.03
Oct. 30.....	37.98	Jan. 24.....	1 51.89	Oct. 8.....	40.57	Aug. 5.....	42.43
Dec. 10.....	37.39	Mar. 15.....	1 47.12	Nov. 28.....	39.41	5.....	1 40.34
<i>1932</i>		Apr. 30.....	1 49.01	<i>1937</i>		26.....	1 39.37
Jan. 13.....	38.29	June 18.....	1 43.40	Feb. 5.....	38.94	Sep. 19.....	1 39.08
Mar. 5.....	38.40	Aug. 8.....	1 40.53	Apr. 13.....	1 40.85	Oct. 17.....	1 39.80
Mar. 21.....	42.52	Oct. 5.....	40.53	June 8.....	1 47.31	Nov. 15.....	1 39.29
Apr. 25.....	1 48.40	Nov. 21.....	1 40.90			Dec. 8.....	1 38.55

1 Pump operating in well.

## Well 25/43-11G1 (city of Spokane No. 1)

OWNER.—City of Spokane, Water Division.

LOCATION.—In the SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., easternmost of three wells south of "well-electric" pump station.

DESCRIPTION.—Public-supply dug well, 38 feet deep and 28 feet in diameter, open-bottom brick and steel casing. Centrifugal pump<sup>2</sup>, capacity 57.6 million gallons a day.

MEASURING POINTS.—Staff gage attached to brick curb about 4 feet east of door to well house, reading in feet above city datum. At ladderway to gage, top face of manhole cover, through  $\frac{3}{4}$ -inch hole; 1,919.09 feet above city datum.

BENCH MARK.—Inside well house, on concrete footwalk at east side of manhole and ladder way, a chiseled square marked "BM 1919.08"; 1,919.09 feet above city datum and 1,902.53 feet above sea-level datum of 1929.

WATER LEVELS.—First recorded measurement, April 30, 1908. Lowest levels yet recorded, July 25, 1924, and August 10, 1926; highest, May 31, 1917; range, 21.4 feet. Water level in well almost constantly depressed below true static level owing to large withdrawals for municipal supply; maximum draw-down about 3.7 feet.

Measurements given in feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. From record of measurements about 7:30 a. m. each day by superintendent of pump station.

Water levels in well 25/43-11G1 (city of Spokane No. 1) for water years ending September 30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1907-08</i>												
5								103.45	100.15		89.65	
10								103.40	100.20		88.95	
15								102.60	100.20	89.75	88.7	
20								101.70		88.7		
25								101.10	95.6	92.6		
30							104.05		93.3			
31								100.50		89.8		
<i>1908-09</i>												
5										91.40	88.50	88.70
10										91.40	88.50	88.50
15									98.0	90.50	89.0	88.45
20									97.0	88.75	88.90	88.45
25									94.8	88.60	89.10	88.50
30									94.4			88.50
31										88.40	89.0	
<i>1909-10</i>												
1							101.6					
5	88.40	89.30	97.0	90.90	90.90	94.80	100.90		95.20	88.90	88.40	89.0
7								100.2				
10	89.20	91.60	96.40	90.0	91.70	97.40	100.70	99.80	93.85	88.90	88.60	89.50
15	89.95	89.90	96.40	90.20	91.65	97.50		100.20	91.0	89.0	88.90	89.10
20	90.10	91.80	95.10	90.20	91.0	100.50		98.80	91.15	88.90	88.70	88.30
25	89.0	94.50	93.40	90.0	90.70	102.0		97.50	90.10	89.50	88.30	89.10
28					90.50							
30		96.50							89.80			89.0
31	89.60		92.10	90.90				96.80		89.30	89.0	
<i>1910-11</i>												
5	89.30	88.80	92.70	89.40	89.70	88.0	96.10	98.40	98.9	93.3	90.9	90.0
10	87.0	87.90	92.90	89.30	89.30	88.50	96.0	100.40	96.6	92.0	91.7	91.3
15	88.0	88.20	92.40	89.30	89.40	88.0	95.40	99.60	97.3	90.3	88.4	90.0
20	88.70	90.40	92.30	89.50	89.60	90.90	95.0	99.60	92.4	91.0	91.3	89.5
25	88.20	93.0	90.70	89.20	88.40	94.20	95.50	99.70	94.2	91.5	91.4	89.7
28					88.30							
30		92.50					97.40		93.6			89.6
31	88.0		89.90	89.50		94.90		98.7		91.3	88.7	
<i>1911-12</i>												
5	89.5	89.7	91.2	89.0	93.4	94.4	97.5	99.0	100.3	92.1	90.0	93.9
10	89.0	90.7	90.5	89.1	92.1	93.9	96.5	99.0	99.0	90.9	88.1	93.8
15	89.7	89.9	90.4	89.5	93.5	93.6	98.7	100.0	98.9	89.7	87.3	90.5
20	89.9	89.9	89.4	89.2	98.2	93.5	98.9	100.75	97.0	89.2	88.9	89.5
25	89.4	91.5	89.2	88.6	98.0	93.6	99.1	102.25	94.4	89.2	88.3	89.0
29					96.7							
30		91.5					98.4	102.1	93.2			89.3
31	89.5		89.6	92.4		95.4				87.6	91.1	
<i>1912-13</i>												
5	89.4	89.5	91.4	89.3	91.4	91.7	95.4	102.1	104.2	95.0	88.0	88.4
10	90.3	90.3	91.1	91.8	89.8	91.7	95.8	102.0	102.5	92.7	88.3	87.6
15	89.8	92.1	90.7	91.4	89.7	92.3	99.7	104.4	101.2	91.4	88.0	87.6
20	89.7	92.9	90.5	91.1	91.2	92.8	102.5	103.4	99.8	89.9	87.9	88.0
25	89.4	92.3	89.8	91.1	91.8	92.9	103.5	102.9	98.0	89.9	87.4	88.4
28					91.8							
30		91.5					103.0		96.6			87.4
31	89.1		90.0	91.7		93.4		104.9		88.3	87.4	
<i>1913-14</i>												
5	88.5	89.9	91.0	88.4	92.9	93.8	95.0	99.4	94.1	88.8	89.2	87.2
10	88.7	91.3	89.7	88.9	92.7	94.0	98.6	99.0	94.0	87.6	89.1	88.9
15	88.8	91.3	89.5	89.6	92.3	95.0	99.5	98.7	92.0	89.7	87.1	88.7
20	88.7	89.5	89.2	89.1	91.8	97.0	102.0	98.6	90.0	87.8	88.8	88.5
25	88.5	90.6	88.7	92.0	91.9	97.4	100.3	97.7	89.8	86.8	87.7	88.4
28					93.1							
30		91.2					100.0		88.0			88.9
31	90.7		89.0	90.3		97.7		94.7		86.5	88.8	

96' CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Water levels in well 25/43-11G1 (city of Spokane No. 1) for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>1914-15</b>												
5	88.8	88.9	92.0	90.2	89.3	89.4	96.4	93.7	96.2	87.8	88.0	89.0
10	89.0	91.6	91.7	90.6	89.4	89.2	96.8	91.4	91.8	89.0	87.6	89.9
15	89.4	92.4	91.6	91.1	89.7	90.4	97.0	93.6	92.2	88.1	89.0	89.6
20	88.8	92.7	90.6	90.3	88.9	94.9	96.4	96.8	90.6	90.8	89.1	89.6
25	89.4	92.6	89.8	89.4	89.6	96.0	96.6	97.2	89.7	89.0	89.2	89.5
29		92.4			89.2							
30							94.7		88.7			89.4
31	89.8		90.2	89.0		96.1		96.5		89.7	89.6	
<b>1915-16</b>												
5	90.8	89.5	90.0	90.2	90.8	93.0	101.0	101.6	100.3	99.1	90.0	90.4
10	89.8	89.5	90.0	90.2	91.1	93.7	100.1	103.0	100.5	98.0	91.6	90.4
15	90.6	89.4	90.2	89.9	91.8	98.0	102.6	101.8	99.2	96.7	89.9	90.4
20	89.9	89.8	90.0	90.2	93.1	98.8	101.0	101.0	100.7	95.5	90.4	90.3
25	89.6	89.6	90.0	90.2	94.1	102.0	100.2	100.8	100.3	93.2	89.5	90.3
29		89.8			94.1							
30							101.5		100.0			90.6
31	89.8		90.0	91.8		102.4		100.4		90.9	89.3	
<b>1916-17</b>												
5	90.3	89.9	90.5	90.1	89.8	90.8	91.6	102.9	105.6	97.5	89.2	90.5
10	90.2	90.4	90.3	90.4	90.5	91.4	95.8	103.9	104.4	92.5	89.0	90.1
15	90.3	90.4	90.0	90.3	91.5	90.8	98.7	106.7	102.8	91.7	89.2	90.9
20	90.1	90.4	90.3	90.1	91.2	90.5	99.6	106.8	102.0	90.8	89.0	89.4
25	89.7	90.5	90.3	90.1	90.5	90.7	101.8	106.4	100.4	90.5	89.0	90.9
28					91.0							
30		90.4					103.4		100.0			90.2
31	90.0		90.1	90.0		90.8		106.9		90.1	89.0	
<b>1917-18</b>												
5	90.1	90.8	90.1		96.4	94.3	98.2	100.6	94.4	89.9	88.8	88.8
10	90.2	90.7	89.8		97.1	93.9	99.5	100.8	95.3	89.9	89.0	88.8
15	90.7	89.8	89.7	102.0	96.9	93.8	101.0	99.6	95.0	89.4	88.5	89.0
20	90.7	89.4	94.1	102.0	96.3	94.7	100.1	99.3	93.0	89.3	89.0	88.5
25	91.1	89.6	97.1	99.0	95.3	96.7	100.7	98.5	93.4	89.2	88.9	88.7
28					94.7							
30		89.9					99.7		91.0			88.7
31	90.5		103.4	98.0		98.4		96.3		88.2	88.5	
<b>1918-19</b>												
5	89.2	89.3	90.2	90.7	94.5	94.1	99.8	101.7	97.2	89.6	90.3	89.1
10	89.7	89.8	90.2	90.5	94.0	93.9	100.6	100.7	96.0	88.7	88.0	88.4
15	89.5	89.6	90.2	90.3	94.0	93.5	100.7	100.5	94.3	88.1	87.8	88.2
20	89.4	90.4	93.1	90.3	91.3	96.0	100.5	98.9	91.4	87.9	89.1	89.1
25	89.2	90.3	93.2	97.0	94.0	97.0	101.5	100.0	90.6	88.1	87.8	88.8
28					94.1							
30		90.2					102.4		90.0			89.6
31	89.2		92.3	96.9		98.0		99.2		88.0	90.7	
<b>1919-20</b>												
5	89.3	89.3	89.5	88.5	88.1	89.4	94.1	97.6	95.9	89.3	86.9	88.3
10	89.9	89.3	89.0	88.5	88.9	89.4	94.5	98.8	95.9	89.4	87.2	88.2
15	89.3	89.1	88.7	88.5	90.1	93.0	97.0	98.6	95.3	88.9	87.3	87.7
20	89.2	89.2	88.6	88.8	90.4	93.1	97.5	100.0	92.0	88.2	87.5	87.9
25	89.0	89.4	88.6	88.4	90.0	95.2	97.2	99.0	90.5	89.0	87.5	88.8
29					89.7							
30		89.4					97.3		91.0			88.7
31	89.3		88.7	88.8		95.0		97.3		86.3	90.0	
<b>1920-21</b>												
5	89.2	90.0	93.4	97.4	93.7	97.3	97.0	101.0	101.0	89.6	87.3	88.0
10	89.9	90.0	94.4	96.7	93.3	97.7	99.0	102.0	100.4	88.0	87.3	88.4
15	91.7	89.4	92.2	96.0	97.3	97.0	100.0	102.6	97.1	86.9	88.9	88.6
20	91.9	93.7	91.4	95.5	98.0	97.6	101.6	103.0	92.3	88.2	88.7	89.1
25	90.3	93.9	91.3	95.0	97.0	97.0	102.0	103.0	89.8	88.7	87.8	88.6
28					96.6							
30		94.2					101.0		92.3			88.6
31	90.4		95.0	94.3		97.0		102.4		87.0	88.6	
<b>1921-22</b>												
5	88.7	89.4	93.1	92.0	88.9	89.5	94.2	98.7	100.0	88.2	86.0	87.8
10	88.8	89.2	92.5	91.3	88.9	89.4	96.5	99.7	100.0	86.9	86.9	87.6
15	88.5	89.0	94.8	89.8	88.7	88.6	96.0	99.7	98.8	86.0	87.5	86.8
20	89.6	89.0	94.3	89.5	89.2	89.7	95.2	103.2	95.9	85.9	87.6	86.7
25	89.3	89.7	93.6	89.4	89.5	90.6	96.6	102.8	87.5	89.4	86.7	86.9
28					89.2							
30		89.9					98.4		90.8			88.0
31	89.0		92.6	89.3		91.6		102.6		85.9	88.2	



## Well 25/43-11G2 (city of Spokane No. 2)

**OWNER.**—City of Spokane, Water Division.

**LOCATION.**—In the SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., westernmost of three wells south of "well-electric" pump station.

**DESCRIPTION.**—Public-supply dug well, 34 feet deep and 30 feet in diameter, open-bottom brick and steel casing. Centrifugal pumps, capacity 24 million gallons a day.

**MEASURING POINT.**—Top of 2-inch plank deck of first stairway landing, marked by copper nail and washer; 3.7 feet below land surface and 1,915.36 feet above city datum.

**BENCH MARK.**—About 5 feet north of well-house door, on concrete rim of manhole, a chiseled square; level with land surface, 1,919.04 feet above city datum, and 1,902.48 feet above sea-level datum of 1929.

**WATER LEVELS.**—First recorded measurement, March 24, 1938. Lowest and highest levels yet recorded, December 12, 1938, and April 25, 1938, respectively; range, 15.68 feet. Water level in well almost constantly depressed below true static level owing to large withdrawals for municipal supply; maximum draw-down unknown.

*Water levels in well 25/43-11G2 (city of Spokane No. 2) <sup>1</sup>*

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1938</i>		<i>1938—Con.</i>		<i>1938—Con.</i>		<i>1938—Con.</i>	
Mar. 24-----	97.58	July 12-----	90.20	Sept. 12-----	90.84	Nov. 15-----	90.53
Apr. 25-----	105.16	18-----	89.90	19-----	90.11	21-----	95.54
29-----	104.51	25-----	90.40	26-----	90.20	28-----	90.50
30-----	104.74	1-----	90.30	Oct. 3-----	90.74	Dec. 5-----	90.33
June 8-----	98.47	Aug. 8-----	90.18	10-----	91.10	12-----	89.48
13-----	94.80	15-----	90.09	17-----	90.64	19-----	90.55
20-----	94.57	22-----	90.30	24-----	90.63	26-----	90.21
27-----	93.00	25-----	89.96	31-----	90.61		
July 4-----	91.75	29-----	89.98	Nov. 7-----	90.53		
11-----	90.45	Sept. 9-----	90.84	14-----	90.52		

<sup>1</sup> In feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. Measurements by superintendent of pump station.

## Well 25/43-11G3 (city of Spokane No. 3)

**OWNER.**—City of Spokane, Water Division.

**LOCATION.**—In the SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., center of three wells south of "well-electric" pump station.

**DESCRIPTION.**—Public-supply dug well, 41 feet deep and 30 feet in diameter, open-bottom brick and steel casing. Centrifugal pumps, capacity 24 million gallons a day.

**MEASURING POINTS.**—Staff or float; accuracy of datum unknown. Top of plank deck at bench mark, 0.02 foot below copper nail and 1,918.65 feet above city datum.

**BENCH MARK.**—In angle of 2-inch well deck opposite ladder, a copper nail with washer; 1,918.67 feet above city datum and 1,902.11 above sea-level datum of 1929.

**WATER LEVELS.**—First recorded measurement, May 5, 1937. Beginning March 24, 1938, lowest and highest levels yet recorded, July 18, 1938, and April 25, 1938, respectively; range, 15.79 feet. Water level in well almost constantly depressed below true static level owing to large withdrawals for municipal supply; maximum draw-down unknown.

Water levels in well 25/43-11G3 (city of Spokane No. 3) <sup>1</sup>

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1938		1938—Con.		1938—Con.		1938—Con.	
Mar. 24	97.72	July 12	90.22	Sept. 12	90.31	Nov. 15	90.69
Apr. 25	105.30	18	89.51	19	90.20	21	90.71
29	104.61	25	90.50	26	90.31	28	90.63
30	104.84	Aug. 1	90.15	Oct. 3	90.89	Dec. 5	90.45
June 8	98.44	8	90.30	10	91.20	12	90.12
13	94.90	15	90.18	17	90.74	19	90.70
20	94.63	22	90.50	24	90.73	26	90.35
27	93.90	25	90.07	31	90.80		
July 4	91.75	30	90.11	Nov. 7	90.73		
11	90.70	Sept. 9	90.35	14	90.72		

<sup>1</sup> In feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. Measurements by superintendent of pump station.

## Well 25/43-11G4 (city of Spokane No. 4)

OWNER.—City of Spokane, Water Division.

LOCATION.—In the SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., northern one of two wells in the "well-electric" pump station, 116 feet N. 33° E. of well 25/43-11G1.

DESCRIPTION.—Public-supply dug well, 44 feet deep and 45 feet in diameter, open-bottom concrete casing. Three centrifugal pumps, total capacity 44.5 million gallons a day.

MEASURING POINTS.—Float gage, reading in feet above city datum. Top of 8-inch stilling pipe for float gage; 1,917.66 feet above city datum.

BENCH MARKS.—At northwest doorway of pump station, at center of concrete apron, a chiseled square; 1,918.60 feet above city datum and 1,902.04 feet above sea-level datum of 1929. Southeast side of well pit, on cap of center post in hand rail, 18.76 feet above pump floor, a chiseled arrow; altitude 1,913.46 feet above city datum and 1,896.90 feet above sea-level datum of 1929.

WATER LEVELS.—First recorded measurement, May 5, 1926. Lowest and highest levels yet recorded, August 5, 1936 and April 30, 1936, respectively; range, 18.7 feet. Water level in well almost constantly depressed below true static level owing to large withdrawals for municipal supply; maximum draw-down about 5.5 feet.

Measurements given in feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. From record of measurements about 7:30 a. m. each day by superintendent of pump station.

## Water levels in well 25/43-11G4 (city of Spokane No. 4) for water years ending September 30

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1925-26												
1											89.6	90.7
14												90.3
15								95.2	91.3	89.5	89.5	
30									90.1			
31								90.5				
1926-27												
-----	91.2	92.3	97.0	94.5	92.1	97.2	97.0	103.4	102.5	93.5	90.0	91.1
15	91.3	93.3	98.2	95.2	94.0	96.6	97.6	101.6	101.9	91.4	90.5	91.2



## Well 25/43-11G6 (city of Spokane "gauge well" No. 1)

OWNER.—City of Spokane, Water Division.

LOCATION.—In the SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., about 440 feet S. 85° E. of well 25/43-11G1 and about 35 feet south of center of Riverton Avenue, in brick instrument shelter.

DESCRIPTION.—Permanent observation dug well, 64 feet deep and 30 inches in diameter, open-bottom concrete-tile casing.

MEASURING POINT.—Top of concrete-tile casing, north side, at chiseled arrow; 1.5 feet above land surface and 1,952.34 feet above city datum.

BENCH MARK.—At northwest corner of brick instrument shelter, on top face of concrete foundation, level with land surface, a chiseled square; 1,950.87 feet above city datum and 1,934.31 feet above sea-level datum of 1929.

WATER LEVELS.—Water-level recorder, by the city Water Division from December 10, 1926, to March 25, 1938, and by the Geological Survey beginning March 26, 1938. Lowest and highest levels, July 29, 1930, and December 26, 1933, respectively; range, 21.7 feet. Water level commonly depressed from 0.6 to 1.0 foot below true static level owing to large withdrawals from adjacent city wells.

Measurements given in feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. Interpolated from charts from water-level recorder.

*Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gauge well" No. 1)  
for water years ending September 30*

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1926-27												
1				95.2	93.3	98.1	98.3	103.8	103.5	99.2	92.3	92.6
2				95.2	95.0	98.4	98.2	103.8	103.5	97.7	92.5	92.6
3				95.2	95.2	98.6	98.6	103.8	103.2	96.7	92.6	92.4
4				94.0	95.6	98.4	98.7	103.8	103.3	96.0	92.7	92.7
5				93.8	95.7	98.6	98.9	103.8	103.2	96.4	92.3	92.6
6				93.7	96.0	98.7	98.9	103.4	103.1	96.0	92.3	92.6
7				93.5	95.9	98.6	99.1	103.1	102.9	95.5	92.7	92.5
8				93.5	96.0	98.5	99.0	103.3	103.6	94.7	92.5	92.4
9				93.5	96.0	98.4	99.1	102.7	103.8	94.9	92.4	92.6
10				93.5	95.9	98.3	99.0	102.5	103.9	94.5	92.4	92.7
11			100.3	93.6	95.9	98.2	98.6	102.6	104.1	95.1	92.4	92.6
12			100.0	93.7	95.7	98.1	98.9	102.2	104.1	94.2	92.9	92.4
13			99.9	93.8	95.8	98.1	98.7	102.2	104.0	94.1	92.6	92.6
14			99.6	93.8	95.7	98.0	99.0	101.9	103.9	94.0	92.8	92.5
15			99.3	93.9	95.5	98.0	99.1	102.5	103.7	93.8	92.6	92.6
16			99.0	93.9	95.5	98.1	99.4	102.6	103.5	93.6	92.5	92.3
17			98.8	94.0	95.5	97.8	99.6	103.5	103.2	93.4	92.6	92.2
18			98.6	94.1	95.6	97.8	99.7	103.5	102.9	93.5	92.3	92.3
19			98.5	94.2	95.7	97.8	99.8		102.8	93.2	92.4	92.2
20			98.3	94.5	95.9	97.8	99.8	105.8	102.5	93.1	92.4	92.2
21			98.0	94.7	96.2	97.7	99.7	105.8	102.0	92.9	92.6	92.1
22			97.8	93.9	97.0	97.4	99.6	105.6	102.0	92.5	92.5	92.2
23			97.4	93.9	97.6	97.7	99.6	105.4	101.7	92.5	92.4	92.3
24			97.3	93.7	98.0	97.7	99.5	104.9	101.3	92.5	92.4	92.5
25			97.0	93.6	98.2	97.8	99.5	104.9	100.8	92.7	92.5	92.5
26			96.8	93.9	98.2	97.8	99.8	104.8	101.1	93.0	92.5	92.5
27			96.7	94.4	98.4	97.8	100.9	104.5	100.7	92.8	92.6	92.5
28			96.4	94.9	98.2	97.9	101.8	104.3	100.8	92.7	92.6	92.5
29			96.3	94.9		97.7	103.0	104.2	100.1	92.7	92.8	92.5
30			96.2	94.8		97.8	103.3	104.1	99.8	92.6	92.8	92.6
31			96.0	93.6		97.9		104.0		92.4	92.7	

102 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES 1941-43

Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gage well" No. 1) for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>1927-28</b>												
1	92.5	94.6	103.6	97.3	98.3	95.6	102.9	102.5	103.5	94.0	91.9	91.5
2	92.5	94.6	103.8	97.1	98.2	95.6	103.2	102.8	103.1	93.8	91.9	91.4
3	92.5	94.6	103.9	96.9	98.1	95.5	103.6	103.1	103.1	93.7	92.3	91.6
4	94.9	94.6	104.1	96.9	97.9	95.0	103.6	103.2	102.3	94.0	91.9	91.4
5	96.2	95.2	104.3	96.9	98.2	94.6	103.5	103.2	102.1	94.5	92.4	91.4
6	97.4	96.7	104.3	96.9	98.0	95.3	103.4	103.2	101.6	94.5	91.9	91.4
7	97.4	97.6	104.3	97.0	98.0	95.8	103.2	103.3	101.5	94.0	91.9	91.7
8	97.3	98.2	104.1	96.9	98.1	96.2	103.0	103.6	101.1	93.8	91.9	91.9
9	97.2	98.7	103.9	97.0	98.1	96.7	102.7	104.0	100.7	93.2	91.7	91.7
10	97.1	99.1	103.6	-----	98.0	97.1	102.7	104.5	100.0	93.0	91.9	91.9
11	96.3	99.3	103.3	-----	98.0	98.1	102.3	104.8	100.1	92.5	91.7	91.7
12	96.3	99.3	103.1	-----	98.2	98.7	102.1	105.4	99.6	92.6	91.2	91.2
13	96.4	99.3	102.6	-----	97.9	99.6	101.9	105.9	96.7	92.4	91.9	91.9
14	96.4	99.3	102.3	-----	97.8	99.9	101.7	105.9	96.1	92.4	92.0	92.0
15	96.0	99.5	101.9	-----	97.8	100.3	101.6	105.7	96.1	-----	91.5	91.5
16	96.0	99.7	101.5	-----	97.7	100.2	101.3	106.1	95.5	-----	91.4	91.4
17	95.9	99.9	101.2	-----	97.5	100.2	101.3	105.9	96.6	-----	91.5	91.5
18	95.6	100.0	100.8	-----	97.4	100.2	101.2	106.3	96.1	-----	91.5	91.5
19	95.1	100.1	100.6	100.4	97.5	100.2	101.2	106.1	96.0	-----	91.8	91.8
20	95.0	100.2	100.2	100.3	97.2	100.2	101.1	106.0	95.7	92.7	91.5	91.5
21	95.0	100.4	99.9	100.1	97.1	100.2	101.0	106.0	94.9	92.5	91.8	91.8
22	95.1	100.5	100.0	100.0	97.0	100.4	101.0	106.1	95.4	92.6	91.8	91.8
23	-----	100.6	99.5	99.9	96.9	100.7	100.9	106.1	95.0	92.0	91.6	91.6
24	-----	100.6	98.0	99.6	96.7	101.2	100.9	106.0	94.8	92.1	91.6	91.6
25	-----	100.8	98.7	99.5	96.5	101.8	101.0	105.9	94.6	92.2	91.7	91.7
26	-----	101.2	98.5	99.3	96.6	101.9	101.2	105.6	94.8	92.2	92.0	92.0
27	-----	101.9	98.4	99.1	96.2	102.1	101.2	105.9	94.5	91.9	91.7	91.7
28	93.9	102.7	98.2	98.9	96.2	102.2	101.6	105.6	94.8	91.7	91.9	91.9
29	94.0	103.1	97.9	98.7	95.9	102.3	101.9	105.7	94.4	92.4	91.5	91.5
30	94.0	103.5	97.7	98.6	-----	102.4	101.8	105.3	93.9	91.9	91.6	91.6
31	94.6	-----	97.5	98.4	-----	102.5	-----	105.2	-----	91.7	91.6	91.6
<b>1928-29</b>												
1	-----	92.0	92.0	91.3	91.5	90.8	95.5	99.1	98.7	92.5	90.4	91.6
2	92.1	92.1	92.1	91.7	91.5	90.9	95.4	99.4	99.0	92.6	90.6	91.5
3	-----	92.0	91.9	-----	91.7	91.2	95.9	99.5	98.5	92.6	90.6	91.3
4	-----	92.3	91.9	-----	91.5	90.9	95.9	99.6	96.2	92.7	90.6	91.6
5	-----	91.9	91.9	-----	91.4	91.1	95.9	99.5	95.3	92.4	90.6	91.8
6	-----	91.9	91.8	-----	91.2	91.6	95.2	99.8	96.0	92.0	90.5	91.4
7	-----	91.8	91.9	-----	91.3	91.2	95.7	99.7	95.9	91.6	90.3	91.7
8	-----	91.8	92.0	-----	91.0	91.1	95.2	99.7	96.5	91.6	90.5	91.8
9	92.0	91.8	92.2	-----	90.9	90.7	95.0	99.4	96.6	91.8	90.3	91.7
10	-----	91.8	92.1	-----	91.2	90.9	95.0	99.3	97.1	91.6	90.5	91.8
11	-----	92.0	91.9	-----	90.8	91.3	95.1	99.3	95.1	91.7	90.4	91.7
12	-----	91.7	92.0	-----	90.9	91.2	95.0	98.9	95.7	91.5	90.5	91.6
13	-----	91.7	91.9	-----	90.9	91.3	94.3	99.5	95.6	91.4	90.3	91.4
14	-----	91.7	91.9	-----	91.0	91.3	94.1	99.5	95.6	91.4	90.5	91.6
15	-----	91.7	92.0	-----	90.9	91.6	94.3	99.6	95.0	91.3	90.3	91.7
16	-----	91.7	92.1	-----	91.0	90.9	94.1	99.8	96.2	91.4	90.5	91.7
17	-----	91.7	91.9	91.7	90.9	90.9	94.6	100.0	96.1	91.4	90.3	91.7
18	-----	91.9	92.1	-----	90.8	91.2	94.6	99.6	95.8	91.1	90.8	91.7
19	-----	91.7	92.2	-----	90.9	91.6	93.7	99.8	94.7	91.1	90.7	91.8
20	91.9	91.6	92.3	-----	90.9	91.6	94.5	99.7	94.8	91.2	90.6	91.7
21	-----	91.8	92.2	-----	91.0	91.6	95.4	99.5	94.7	91.1	90.5	91.7
22	91.9	91.9	92.1	-----	91.0	91.6	95.4	99.6	94.4	91.0	91.1	91.7
23	-----	91.9	92.0	-----	90.8	91.2	95.9	99.7	94.2	91.0	91.1	91.8
24	-----	91.9	91.8	91.7	91.5	91.2	96.9	99.8	93.9	90.9	91.2	91.7
25	92.0	92.1	91.7	91.6	90.8	91.8	97.5	99.8	93.7	90.8	91.0	91.8
26	91.8	91.9	91.5	91.5	90.8	91.9	97.5	99.7	94.0	90.5	91.3	91.6
27	91.7	91.9	91.6	91.6	90.9	92.1	97.5	99.7	93.5	90.5	91.3	91.7
28	91.9	92.0	91.6	91.4	90.9	92.2	96.0	99.9	92.9	90.7	91.2	91.7
29	91.7	91.9	91.6	91.4	-----	92.2	98.4	99.3	92.5	90.7	91.0	91.6
30	91.2	92.0	91.1	91.5	-----	94.2	98.7	99.0	92.4	90.7	91.0	91.6
31	91.8	-----	91.0	91.6	-----	95.2	-----	98.9	-----	90.4	91.0	91.0

Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gag" well" No. 1)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1929-30</i>												
1	91.5	91.7	91.2	90.9	91.5	92.5	97.1	98.7	96.1	92.5	90.4	90.9
2	91.5	91.8	91.3	90.9	90.9	92.0	97.1	98.7	96.4	92.4	90.5	90.9
3	91.4	91.6	91.2	90.8	90.7	92.0	97.2	98.7	96.1	92.4	90.8	91.0
4	91.3	91.6	91.2	90.7	90.6	92.0	97.0	98.8	96.3	92.2	90.9	91.0
5	91.3	91.6	91.2	91.0	90.9	92.1	97.1	98.7	96.6	91.9	90.9	91.0
6	91.3	91.6	91.5	90.8	90.6	92.0	97.0	98.6	96.7	91.8	90.9	91.0
7	90.9	91.6	91.2	90.8	90.6	92.4	97.4	98.2	96.2	91.7	90.6	91.4
8	91.3	91.5	91.3	90.8	90.5	92.8	97.9	98.1	96.0	91.4	90.5	91.6
9	91.1	91.4	91.0	90.8	90.4	92.4	97.8	97.5	95.6	91.2	90.4	-----
10	91.4	91.4	91.0	91.1	90.6	92.3	98.0	96.6	94.9	91.1	90.9	-----
11	91.4	91.4	91.1	91.3	90.6	92.3	98.1	96.5	94.5	91.2	90.7	-----
12	91.3	91.3	91.0	91.3	90.6	92.0	97.7	95.4	94.5	91.0	90.6	-----
13	91.3	91.3	91.1	91.3	90.7	92.1	97.5	96.0	94.4	91.1	90.6	-----
14	91.3	91.3	91.1	91.3	90.7	92.0	98.2	95.6	94.3	90.4	90.6	-----
15	91.4	91.3	91.3	91.1	90.7	92.4	98.3	94.7	94.0	90.7	91.0	-----
16	91.2	91.3	91.1	91.0	90.8	92.4	98.3	94.8	94.0	90.6	91.3	-----
17	91.2	91.3	91.0	91.0	90.8	92.2	98.3	95.8	93.8	90.6	91.2	91.1
18	91.2	91.3	91.0	91.1	90.5	91.9	98.8	95.3	93.4	90.5	90.8	91.3
19	91.1	91.3	91.0	91.6	90.6	92.0	98.2	95.1	92.8	90.5	91.0	91.2
20	91.1	91.3	91.0	91.2	90.8	91.7	98.2	95.3	92.8	90.7	91.2	91.2
21	91.1	91.3	91.0	91.4	92.2	92.1	98.2	95.6	94.3	90.5	91.3	91.3
22	91.0	91.3	91.2	91.5	91.8	92.4	98.7	95.8	94.2	90.5	91.0	91.3
23	91.0	91.3	90.9	91.4	93.1	92.6	98.6	95.9	93.9	90.4	90.8	91.2
24	91.0	91.3	90.9	91.3	93.7	92.9	98.8	96.1	93.7	90.4	90.8	91.1
25	91.1	91.3	91.0	91.4	93.9	93.9	98.8	96.0	93.4	90.4	90.6	91.0
26	91.4	91.3	90.8	91.5	93.9	94.8	98.5	95.7	93.3	90.3	90.7	90.9
27	91.5	91.3	90.9	91.5	94.1	95.7	98.8	95.3	92.5	90.5	90.9	91.0
28	91.3	91.3	90.9	91.4	93.8	95.8	98.8	94.9	92.4	90.4	91.0	90.8
29	91.4	91.3	91.1	91.4	-----	96.2	98.9	94.9	92.4	90.1	90.9	90.8
30	91.5	91.3	90.9	91.5	-----	96.3	98.8	95.6	92.4	90.4	90.9	90.9
31	91.4	-----	90.9	90.9	-----	96.9	-----	95.9	-----	90.4	90.9	-----
<i>1930-31</i>												
1	90.9	-----	-----	-----	-----	-----	-----	99.0	93.7	-----	-----	-----
2	90.8	-----	-----	-----	-----	-----	-----	99.5	93.3	90.8	-----	-----
3	90.8	-----	-----	-----	-----	92.2	98.4	100.0	93.2	90.8	-----	-----
4	90.8	-----	-----	-----	-----	-----	98.7	99.9	92.8	90.8	-----	-----
5	91.0	-----	-----	-----	-----	-----	-----	100.1	92.5	90.8	-----	-----
6	90.8	-----	-----	-----	-----	-----	-----	100.4	92.4	90.2	90.6	-----
7	90.8	-----	-----	-----	-----	-----	-----	99.2	100.3	90.4	90.4	-----
8	90.8	-----	-----	-----	-----	-----	-----	100.4	92.7	90.5	90.4	-----
9	90.8	-----	-----	-----	-----	-----	-----	99.6	100.3	93.3	90.7	-----
10	90.8	-----	-----	-----	90.8	-----	100.0	100.5	93.0	90.0	90.4	-----
11	90.8	-----	-----	-----	90.7	-----	100.3	100.1	92.7	-----	90.4	-----
12	90.8	-----	-----	-----	90.7	-----	100.7	99.8	92.5	-----	90.4	-----
13	90.8	-----	-----	-----	90.8	-----	100.7	99.9	92.2	-----	90.5	-----
14	90.8	-----	-----	-----	90.8	-----	100.8	99.8	91.7	90.6	90.4	91.1
15	90.7	-----	-----	-----	90.8	-----	100.8	99.5	91.8	91.0	90.5	91.2
16	90.8	-----	-----	-----	90.8	-----	100.8	99.9	92.4	90.8	90.7	91.2
17	90.9	-----	-----	-----	90.8	-----	100.8	99.8	93.8	90.7	90.6	90.9
18	91.0	-----	-----	-----	90.8	-----	100.7	99.6	93.2	90.5	90.5	90.9
19	90.8	-----	-----	-----	91.0	-----	100.6	99.3	92.9	90.9	90.8	90.9
20	-----	-----	-----	-----	91.4	-----	100.5	99.1	92.1	90.6	91.2	90.8
21	-----	-----	-----	-----	92.3	-----	100.4	99.0	92.0	90.4	91.0	90.8
22	-----	-----	-----	-----	-----	-----	100.3	99.2	92.2	90.4	91.1	90.8
23	-----	-----	-----	-----	-----	-----	100.1	98.6	92.6	90.4	91.2	91.2
24	-----	-----	-----	-----	-----	-----	99.9	98.0	92.3	90.4	91.0	91.3
25	-----	-----	-----	-----	-----	-----	99.7	96.2	91.2	90.5	91.0	91.3
26	-----	-----	-----	-----	-----	-----	99.4	95.6	91.7	90.7	91.2	91.2
27	-----	-----	-----	-----	-----	-----	99.3	95.2	91.5	90.4	91.3	91.2
28	-----	-----	-----	-----	-----	-----	99.2	94.1	91.4	90.3	91.3	91.2
29	-----	-----	-----	-----	-----	-----	99.2	94.2	91.5	90.5	91.4	91.2
30	-----	-----	-----	-----	-----	-----	99.3	94.3	91.6	90.5	91.2	91.3
31	-----	-----	-----	-----	-----	-----	94.4	-----	90.5	-----	-----	-----

104 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gage well" No. 1) for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1931-32</i>												
1	91.3	90.9	90.8	91.1	91.4	96.5	101.5	103.8	101.7		91.9	91.6
2	91.2	90.8	90.8	91.3	91.4	97.3	101.7	103.8	101.4		91.9	91.6
3	91.1	91.0	90.8	91.8	91.5	97.6	102.2	103.9	101.0		91.8	91.6
4	91.0	90.9	90.8	92.0	91.5	97.9	102.6	104.1	100.7		91.8	91.6
5	91.1	90.9	90.8	91.9	91.5	98.1	103.1	104.3	100.3		91.8	91.6
6	91.1	90.8	90.8	91.8	91.5	98.2	103.3	104.5	100.1		91.6	91.3
7	91.1	90.6	90.8	91.9	91.5	98.2	103.4	104.6	99.8	94.2	91.6	91.3
8	91.0	90.9	90.8	92.0	91.6	98.3	103.3	104.6	99.8	94.0	91.6	91.6
9	91.0	90.6	90.8	92.0	91.9	98.1	103.2	104.6	99.7	93.9	91.5	91.6
10	91.2	90.9	90.8	92.3	92.2	98.1	103.1	104.8	99.5	93.9	91.5	91.4
11	91.2	90.9	90.8	92.3	92.2	97.8	103.0	104.6	99.2	93.4	91.8	91.6
12	91.3	90.9	90.8	92.8	92.2	97.8	102.9	104.5	99.0	92.9	91.6	91.6
13	91.2	90.8	90.9	92.9	91.9	97.6	103.1	104.3	98.3	92.4	91.5	91.2
14	91.1	90.9	90.9	93.0	91.9	97.1	103.7	104.5	98.1	93.0	91.8	91.5
15	91.0	90.9	90.9	93.0	91.9	97.0	104.3	104.6	98.3	92.4	91.5	91.3
16	91.1	90.9	90.9	93.1	91.9	96.9	104.2	104.2	98.2	92.4	91.3	91.5
17	91.2	90.9	90.9	93.1	91.8	97.1	104.4	104.3	97.8	92.7	91.1	91.7
18	91.2	90.9	91.0	93.1	91.8	97.2	104.4	104.2	97.5	92.4	91.3	91.6
19	91.2	90.8	90.9	93.5	91.6	97.7	104.4	104.0	97.7	92.6	91.4	91.6
20	91.4	90.9	90.9	93.6	91.6	98.5	104.4	103.8	97.2	92.7	91.4	91.6
21	91.5	90.8	91.0	93.7	92.0	99.0	104.4	103.5	96.9	92.4	91.7	91.8
22	91.5	90.9	90.8	93.6	92.0	99.5	104.4	103.7	96.6	92.2	91.8	91.8
23	91.4	90.8	90.8	93.3	91.8	99.7	104.3	103.9	96.4	92.1	91.8	91.8
24	91.4	90.8	90.8	92.4	91.9	99.8	104.0	104.1	95.8	92.1	91.7	91.9
25	91.3	90.8	90.8	92.2	92.4	100.1	103.7	104.1	96.0	92.1	91.4	91.8
26	91.1	90.7	90.8	91.9	92.9	100.3	103.4	103.9	96.0	92.0	91.4	91.7
27	91.1	90.8	90.9	91.9	93.6	100.4	103.3	103.6	95.6	92.0	91.4	91.7
28	91.0	90.8	90.8	91.8	94.8	100.4	103.4	103.1	96.0	92.0	91.6	91.7
29	90.9	90.8	90.8	91.8	95.8	100.6	103.6	102.9		92.0	91.5	91.5
30	90.7	90.9	90.9	91.7		100.9	103.7	102.4		91.9	91.8	91.7
31	90.9		90.9	91.6		101.2		102.0		92.0	91.6	
<i>1932-33</i>												
1	91.6	91.5	94.6	93.3	93.5	93.5	97.9	105.7	103.9	100.3	91.7	91.6
2	91.9	91.5	94.7	93.0	93.4	92.9	98.3	105.8	103.9	100.2	91.6	91.5
3	91.7	91.5	94.7	92.9	93.3	92.8	98.2	105.8	104.1	100.5	91.7	91.5
4	91.7	91.4	96.6	93.1	93.3	92.7	98.5	105.9	104.2	99.5	91.7	91.7
5	91.6	91.4	97.2	93.5	93.4	92.8	98.8	105.8	104.2	97.9	92.1	91.4
6	91.6	91.7	97.3	95.0	93.2	92.6	99.2	105.7	104.3	96.7	92.3	91.5
7	91.7	91.4	97.4	95.2	92.7	93.4	99.5	105.7	104.7	95.3	92.0	91.6
8	91.8	91.3	97.4	95.5	92.5	93.9	99.7	105.6	104.8	95.1	91.6	91.4
9	91.9	91.4	97.3	95.6	92.4	94.0	100.0	105.4	104.8	94.8	91.4	91.5
10	91.6	92.0	96.8	96.2	93.0	94.1	99.9	105.1	104.9	95.0	91.7	91.7
11	91.7	92.2	96.9	96.6	92.8	94.1	99.8	104.8	105.3	94.6	91.6	91.8
12	91.9	92.2	94.4	96.6	93.0	94.4	99.6	104.4	105.2	93.7	91.6	91.7
13	92.0	92.5	93.2	96.6	92.7	94.4	99.6	104.1	105.2	93.6	91.9	91.8
14	91.9	93.2	93.3	96.7	92.7	94.6		104.0	105.5	93.4	91.4	92.0
15	92.0	95.9	93.2	96.9	92.8	94.8		103.6	105.4	92.6	91.3	92.1
16	92.1	96.5	93.5	96.5	93.1	95.1		104.1	105.3	92.7	91.0	92.1
17	91.9	96.7	93.5	96.4	93.6	95.4		104.2	105.2	93.0	91.1	92.1
18	92.0	97.0	93.6	95.9	93.7	95.7	99.5	104.2	105.4	93.0	91.4	91.9
19	91.9	97.2	93.7	95.2	93.9	96.0	99.6	104.1	104.7	93.0	91.4	92.0
20	91.8	97.7	96.1	95.0	93.7	96.0	99.7	104.0	104.3	92.9	91.7	91.6
21	91.9	97.5	96.4	95.0	93.7	96.3	99.8	104.1	103.9	93.1	91.9	92.0
22	91.8	97.5	96.3	94.7	93.6	96.6	100.0	103.8	103.6	92.7	91.9	92.0
23	91.9	97.5	96.1	94.4	93.7	96.8	100.5	103.7	103.2	92.8	91.6	91.9
24	91.6	97.4	96.1	94.4	93.7	96.9	100.7	103.6	102.9	92.0	91.6	91.5
25	91.7	97.3	94.8	94.3	93.0	96.9	101.2	103.4	103.0	91.5	91.6	91.5
26	91.7	97.1	94.4	94.2	92.8	97.1	101.8	103.8	102.4	91.9	91.6	91.8
27	91.6	97.2	94.4	94.2	93.0	96.9	102.8	103.6	101.7	92.0	91.6	91.9
28	91.6	96.8	94.3	95.3	93.1	96.9	103.4	103.6	101.9	92.4	91.0	91.9
29	91.5	96.3	94.0	94.4		97.1	104.0	103.7	101.5	92.5	90.9	92.0
30	91.7	94.8	93.8	94.1		97.3	104.9	103.8	101.2	92.6	91.7	91.9
31	91.5		93.8	93.8		97.6		103.8		91.6	91.7	

Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gage well" No. 1)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1933-34												
1	92.0	97.3	93.9	108.8	104.0	99.0	103.4	102.7	96.1	92.4	91.4	91.9
2	91.8	97.4	93.9	108.5	103.7	98.9	104.3	102.5	95.8	92.1	91.4	91.4
3	91.9	97.4	93.8	108.3	103.5	99.0	104.9	102.3	95.5	92.0	91.7	91.9
4	91.9	98.2	93.8	108.2	103.3	99.3	105.2	102.1	95.4	91.9	92.0	91.4
5	91.9	98.8	93.7	108.4	103.0	99.5	105.3	101.8	95.5	91.8	91.9	91.5
6	91.9	99.1	93.9	108.6	102.8	99.7	105.2	101.7	95.5	91.3	91.9	91.4
7	91.9	99.3	95.9	108.6	102.6	99.9	105.1	101.4	95.3	91.4	91.6	91.4
8		99.2	97.4	108.4	102.5	100.0	105.0	101.2	95.1	91.8	91.3	91.9
9		99.0	97.6	108.1	102.3	100.2	104.9	101.1	94.5	91.4	91.4	91.9
10		98.9	98.2	107.5	102.2	100.3	104.8	100.9	94.0	91.4	91.2	92.0
11		98.7	99.2	107.3	102.0	100.3	104.6	100.7	93.9	91.7	91.3	92.0
12		98.5	100.5	106.8	101.8	100.3	104.4	100.6	93.4	91.9	91.5	91.9
13		98.3	101.8	106.3	101.7	100.3	104.3	100.3	93.0	91.7	91.4	91.9
14		98.0	102.8	105.9	101.5	100.3	104.2	100.0	92.8	91.5	91.4	91.9
15		97.7	103.7	105.4	101.3	100.3	104.1	99.8	92.6	91.8	91.3	91.9
16		97.1	104.2	104.9	101.2	100.3	104.2	99.6	93.3	91.7	91.2	91.9
17		95.7	104.4	104.4	101.0	100.4	104.1	98.2	93.5	91.7	91.2	91.2
18		95.4	104.5	104.1	100.8	100.5	104.0	98.1	93.5	91.9	91.1	91.3
19		95.3	104.6	103.8	100.6	100.6	103.8	97.9	93.5	91.7	91.1	91.8
20		95.2	105.0	103.5	100.5	100.6	103.6	97.8	92.7	91.9	91.1	91.0
21		94.8	105.5	103.4	100.2	100.6	103.4	97.6	92.7	91.9	91.0	91.8
22		94.7	106.2	103.3	100.1	100.5	103.3	97.3	92.7	91.9	91.4	91.8
23	93.8	94.0	107.3	103.2	99.9	100.6	103.2	96.5	92.4	91.4	91.2	91.8
24	94.3	93.9	109.8	103.7	99.7	100.6	103.0	96.0	92.2	91.5	91.3	91.8
25	95.5	94.1	111.5	104.2	99.5	100.6	103.1	95.6	92.0	91.4	91.3	91.7
26	95.7	94.1	111.8	104.8	99.4	100.5	103.1	95.5	92.3	91.3	92.0	91.8
27	95.7	94.1	111.7	104.9	99.2	100.5	103.0	95.4	94.3	91.3	91.4	91.5
28	95.7	94.0	111.0	104.8	99.1	100.5	103.1	95.3	93.6	91.4	91.8	91.7
29	95.8	94.0	110.4	104.7		100.6	102.9	95.4	93.4	91.3	91.4	91.8
30	96.4	94.0	109.6	104.5		101.2	102.9	95.8	92.5	91.3	91.4	91.7
31	96.9		109.3	104.2		102.3		96.1		91.4	91.3	
1934-35												
1	91.5	91.9	94.9	96.0	96.9	96.2	97.9	104.5	103.9	94.9	91.9	91.9
2	91.5	91.9	94.8	96.1	96.9	96.2	97.8	104.6	103.7	94.8	91.8	91.7
3	91.7	91.9	94.8	96.0	97.0	96.2	97.8	104.7	103.6	94.3	91.5	91.9
4	91.7	92.6	94.7	95.0	97.0	96.2	97.6	104.7	193.2	94.3	92.1	92.0
5	91.5	93.2	94.7	94.9	97.0	96.2	97.6	104.7	193.0	94.3	92.2	92.0
6	91.7	93.8	94.7	95.0	97.0	96.1	97.6	194.7	102.6	94.3	92.5	92.1
7	91.9	94.6	94.6	95.3	97.0	96.1	97.3	104.8	102.5	94.2	91.8	92.1
8	91.7	95.2	93.9	95.6	96.9	95.4	97.3	105.0	102.3	94.4	91.4	92.2
9	91.5	95.3	93.8	95.7	96.9	95.4	97.4	105.2	102.0	94.3	91.3	92.2
10	91.4	95.3	93.8	95.7	96.8	95.3	97.5	105.3	101.8	93.8	91.2	92.2
11	91.6	95.4	93.4	95.8	96.7	95.3	97.6	105.3	101.5	93.6	91.5	92.1
12	91.5	95.4	92.8	95.7	96.6	95.3	97.8	105.2	101.2	93.2	91.6	92.2
13	91.6	95.4	93.6	95.6	96.6	96.0	98.2	105.1	101.2	92.8	91.4	92.4
14	91.9	95.2	93.6	95.6	96.5	96.3	98.6	104.9	101.0	92.8	91.3	92.2
15	91.8	95.0	93.8	95.3	96.4	97.3	99.3	104.7	100.8	92.4	91.5	92.5
16	91.7	94.4	93.5	95.2	96.3	97.9	100.1	104.6	100.6	92.4	91.8	92.1
17	91.8	93.8	93.5	95.5	96.2	98.4	100.8	104.5	100.3	92.7	91.5	92.3
18	91.7	94.0	93.6	95.4	96.1	98.7	101.4	104.5	100.0	92.8	92.2	92.4
19	91.7	93.9	92.5	95.3	96.0	98.8	101.7	104.4	98.3	92.2	92.4	92.0
20	92.0	93.8	92.3	95.2	95.9	98.8	102.0	104.5	97.8	92.0	92.2	91.9
21	92.1	93.8	93.4	95.0	95.8	98.8	102.3	104.4	97.0	92.0	92.0	92.1
22	91.9	94.2	94.5	95.0	95.7	98.8	102.8	104.4	96.0	92.0	91.9	92.1
23	91.8	94.1	96.2	95.0	95.9	98.7	103.3	104.5	95.7	91.7	92.0	92.0
24	91.7	94.2	96.5	95.3	96.0	98.6	103.6	104.6	95.6	92.2	92.0	92.0
25	91.7	94.5	96.8	95.5	96.2	98.5	103.7	104.7	95.4	92.1	92.1	92.3
26	91.9	94.8	96.8	95.8	96.2	98.4	103.9	104.8	94.9	91.9	92.1	92.3
27	91.9	94.8	96.8	96.1	96.2	98.4	104.0	104.8	94.7	91.5	92.1	92.5
28	91.9	94.8	96.8	96.5	96.2	98.3	104.1	104.6	94.4	91.8	92.2	92.5
29	91.9	94.9	96.6	96.7		98.2	104.4	104.4	94.7	91.7	92.0	92.4
30	92.0	94.8	96.6	96.6		98.1	104.5	104.3	94.9	91.7	92.0	92.4
31	91.9		96.5	96.9		98.0		104.0		91.9	91.9	

106 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES 1941-43

Daily water level at noon in well No. 25/43-11G6 (city of Spokane "gage well" No. 1) for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>1935-36</b>												
1	92.4	91.9				92.0	94.9	107.2	100.3	92.5	91.0	91.6
2	92.5	91.8				91.9	94.9	107.0	100.1	92.7	91.2	92.1
3	92.5	91.7				91.9	94.7	107.0	100.1	93.1	91.5	92.0
4	92.5	91.6				93.0	94.4	106.7	99.8	93.3	91.0	92.0
5	92.6	91.7				94.1	94.3	106.5	98.1	93.4	90.9	91.9
6	92.6	91.6				94.3	94.3	106.5	98.0	92.7	91.0	91.8
7	92.5	91.1		91.2		94.5	94.3	106.4	96.4	92.1	91.1	91.9
8	92.4	91.3		91.3		94.7	94.1	106.3	96.6	92.4	90.9	91.8
9	92.2	91.2		91.6		94.7	94.1	106.0	98.4	92.5	91.0	91.8
10	92.2	91.2		91.6	92.4	95.7	94.2	105.8	98.7	92.8	91.0	91.8
11	92.3	91.2		91.7	92.4	95.9	94.6	105.4	98.7	93.1	91.0	91.6
12	92.2	91.2		91.6	92.7	96.0	95.0	105.2	98.7	93.0	91.1	91.5
13	92.3	91.2		91.6	92.5	96.3	96.0	105.0	97.8	92.4	91.2	91.8
14	92.1	91.1		91.8		96.2	97.1	104.9	98.0	91.8	91.2	91.9
15	92.1	91.1		91.7		96.3	98.2	104.9	97.5	91.8	91.0	91.9
16	92.0	91.1		92.6		96.2	98.9	104.8	96.4	91.6	91.1	91.9
17	92.0	91.1		92.0		96.0	100.1	105.0	95.4	91.5	91.0	91.8
18	92.0	91.1		92.7		96.0	100.8	104.5	95.2	91.4	91.1	91.3
19	92.0	91.4		92.2		95.9	102.1	104.4	95.5	91.6	91.6	91.4
20	92.0	91.3		92.1		95.8	102.6	104.0	95.8	91.4	91.2	91.5
21	92.0	91.4		92.7		95.7	103.5	103.7	95.3	91.2	91.2	91.5
22	91.9	91.5		92.8		95.7	104.5	103.4	94.6	91.2	91.2	91.5
23	91.9	91.6		92.9		95.7	105.1	103.0	94.2	91.4	91.3	91.4
24	91.9	91.4				95.7	105.7	102.5	94.8	91.3	91.2	91.5
25	91.9	91.4				95.7	106.3	102.3	94.3	91.3	91.7	91.2
26	92.0	91.3				95.7	106.8	101.9	93.7	91.2	91.9	91.4
27	92.0					95.6	107.2	101.6	93.9	91.1	92.0	91.7
28	91.9				92.2	95.6	107.5	101.3	94.1	91.0	91.7	91.5
29	91.9				92.1	95.4	107.4	101.0	93.4	91.0	91.4	91.8
30	91.9			92.5		95.3	107.4	100.8	92.7	91.1	91.3	91.7
31	91.9					95.2		100.8		91.6	91.2	
<b>1936-37</b>												
1	91.9	91.8	91.2	90.9	91.6	91.7	95.8	102.8	101.8			92.1
2	91.9	91.1	91.1	91.2	91.8	91.7	96.3	102.7	101.1		91.4	91.8
3	91.9	91.5	91.1	91.2	91.9	91.7	96.6	102.7	101.1		91.3	91.9
4	92.0	91.3	91.4	91.2	91.7	91.7	97.0	103.0	101.0		91.3	92.0
5	92.0	91.4	91.3	91.3	91.6	91.8	97.1	103.4	100.6		91.3	92.6
6	91.9	91.0	91.2	91.1	91.6	91.7	97.1	103.8	100.2		91.3	92.4
7	92.0	90.9	91.3	91.4	91.5	91.8	97.1	104.2	100.0		91.3	92.4
8	92.0	91.2	91.3	91.5	91.5	91.7	97.1	104.4	99.5		91.4	92.3
9	92.0	90.8	91.5	91.9	91.7	92.1	97.2	104.5	99.5		91.5	92.4
10	92.0	90.8	91.2	91.8	91.6	92.1	97.3	104.5			91.7	92.3
11	92.0	90.7	91.1	92.0	91.8	92.2	97.6	104.6			91.7	92.0
12	91.8	90.8	91.2	92.0	91.7	92.3	97.6	104.7			91.7	92.4
13	91.9	90.8	91.2	92.2	91.5	92.4	97.7	104.7			91.4	92.1
14	91.9	90.7	91.2	92.1	91.3	92.6	98.0	104.4			91.5	92.1
15	92.0	90.7	91.2	92.1	91.2	92.9	98.6	104.4			91.6	92.0
16	91.8	90.8	91.2	92.0	91.5	92.9	99.7	104.5			91.4	92.2
17	91.9	90.8	91.2	92.0	91.4	92.9	100.9	104.1				92.2
18	91.9	90.8	91.0	92.0	91.4	93.3	101.1	104.2				92.2
19	91.9	90.8	91.1	92.0	91.6	93.3	101.2	104.1			91.4	92.5
20	91.9	90.9	91.2	91.9	91.5	93.3	101.1	104.1			91.5	92.0
21	92.0	91.0	91.2	91.8	91.5	93.4	101.6	103.8			91.4	92.1
22	92.1	91.2	91.1	91.5	91.5	93.6	102.0	103.6				92.2
23	92.2	91.0	91.1	91.9	91.6	93.7	102.4	103.6				92.1
24	92.2	90.8	90.9	92.0	91.5	93.6	102.4	103.1				91.8
25	92.2	90.7	90.9	91.8	91.9	93.7	102.4	103.6				92.0
26	92.2	90.6	90.9	91.9	92.0	94.4	102.3	103.0				91.8
27	92.0	90.6	90.9	91.9	91.8	94.8	102.3	102.9				91.8
28	92.2	90.6	90.8	91.9	91.5	95.3	102.7	102.6				92.1
29	92.2	90.7	90.8	91.8		95.5	102.7	102.7				92.1
30	91.7	91.3	91.1	91.6		95.7	102.8	102.6			91.9	92.1
31	91.5		91.1	91.8		95.6		102.1			92.0	



## Well 25/43-11K1 (city of Spokane "gage well" No. 2)

OWNER.—City of Spokane, Water Division.

LOCATION.—In the NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 11, T. 25 N., R. 43 E., about 1,400 feet S. 4° E. of well 25/43-11G1, 55 feet north of Spokane International Ry., and 60 feet east of center line of Airport Avenue. In pit with concrete deck and manhole.

DESCRIPTION.—Observation dug well, 70 feet deep, open-bottom concrete-lined pit, 8 feet in diameter first 9 feet, 36-inch concrete-tile casing from 7.5 to 56 feet, 18-inch steel casing from 56 to 70 feet.

MEASURING POINT.—Top of concrete-tile casing at handhole in deck; 7.5 feet below land surface and 1,954.44 feet above city datum.

BENCH MARK.—On steel rim of manhole, east side, a chiseled cross; level with land surface, 1,961.93 feet above city datum, and 1,945.37 feet above sea-level datum of 1929.

WATER LEVEL.—Water-level recorder, by the city Water Division from December 3, 1929, to March 25, 1938, and by the Geological Survey beginning March 26, 1938. Lowest levels yet recorded, December 10 and 16, 1931; highest, December 27, 1933; range, 18.9 feet, of which only about 0.2 foot is caused by heavy draft from the city wells.

Measurements given in feet above a local datum, which is 1,800 feet above city datum and 1,783.44 feet above sea-level datum of 1929. Interpolated from charts from water-level recorder.

*Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2)  
for water years ending September 30*

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1929-30												
1				91.9	92.4	93.6	97.4	99.3	96.7	93.4	91.9	92.0
2				91.8	92.3	93.4	97.5	99.2	96.7	93.2	91.9	92.0
3			91.9	91.8	92.2	93.3	97.6	99.2	96.6	93.2	92.0	92.1
4			91.9	91.7	92.1	93.3	97.6	99.2	96.8	93.1	92.0	92.1
5			91.8	91.8	92.1	93.3	97.7	99.2	97.1	92.9	92.1	92.1
6			92.0	91.9	92.1	93.2	97.8	99.2	96.9	92.8	92.1	92.1
7			92.0	91.8	91.9	93.6	98.0	99.1	96.5	92.8	92.0	92.2
8			91.9	91.8	91.9	93.6	98.1	99.0	96.4	92.6	92.0	92.3
9			91.9	91.8	91.9	93.6	98.3	98.5	95.9	92.5	92.0	92.3
10			91.8	91.8	92.0	93.6	98.4	97.4	95.4	92.4	92.1	92.3
11			91.9	91.9	92.0	93.3	98.5	97.2	95.2	92.4	92.1	92.3
12			91.9	91.9	92.0	93.2	98.6	96.7	95.3	92.3	92.1	92.3
13			91.9	92.0	92.1	93.2	98.7	97.1	95.2	92.3	92.1	92.3
14			91.9	92.0	92.1	93.2	98.8	96.7	94.8	92.2	92.1	92.3
15			91.9	92.0	92.1	93.2	98.9	96.1	94.8	92.1	92.1	92.3
16			91.9	92.0	92.2	93.2	99.0	96.1	94.8	92.1	92.1	92.3
17			91.9	92.2	92.2	93.2	99.1	96.7	94.4	92.0	92.1	92.3
18			91.9	92.3	92.1	93.2	99.2	96.3	94.1	92.0	92.0	92.2
19			91.8	92.3	92.2	93.1	99.2	96.0	93.6	92.0	92.1	92.2
20			91.8	92.3	92.2	93.1	99.1	96.0	93.9	91.9	92.2	92.2
21			91.9	92.4	92.9	93.1	99.0	96.1	95.0	91.9	92.3	92.2
22			91.9	92.4	93.1	93.1	99.1	96.2	94.8	92.0	92.1	92.2
23			91.9	92.4	94.4	93.2	99.1	96.4	94.6	91.9	92.1	92.2
24			91.8	92.4	94.8	93.9	99.2	96.5	94.3	91.9	92.0	92.1
25			91.8	92.4	95.0	94.3	99.2	96.5	94.3	91.7	92.0	92.1
26			91.8	92.4	95.1	94.9	99.2	96.7	94.0	91.8	92.0	92.1
27			91.8	92.5	95.1	96.1	99.3	96.4	93.4	91.8	92.0	92.1
28			91.9	92.4	95.1	96.3	99.2	95.8	93.2	91.8	92.1	92.1
29			91.9	92.4		96.8	99.3	95.9	93.4	91.7	92.1	92.1
30			91.8	92.3		96.9	99.4	96.2	93.4	91.7	92.0	92.1
31			91.9	92.3		97.2		96.4		91.8	92.0	

Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1930-31</i>												
1	92.1	92.0	91.9	-----	91.7	93.3	98.7	99.9	-----	-----	91.9	92.2
2	92.1	92.0	91.9	-----	91.8	93.0	99.0	100.0	-----	92.5	91.9	92.2
3	92.1	92.0	91.9	-----	91.7	92.8	99.2	100.3	-----	92.5	91.8	92.2
4	92.1	92.1	91.9	-----	91.8	92.9	99.4	100.4	-----	92.4	91.7	92.3
5	92.1	91.9	91.9	92.0	91.8	93.2	99.4	100.5	-----	92.4	91.8	92.2
6	92.1	91.9	91.9	92.0	91.8	93.3	99.5	100.7	-----	92.2	91.9	92.3
7	92.1	91.9	91.9	92.0	91.9	93.4	99.7	100.8	-----	92.2	91.7	92.3
8	92.1	91.8	91.8	91.9	92.0	93.2	100.0	100.8	-----	92.2	91.7	92.2
9	92.1	91.8	91.8	91.9	92.0	93.2	100.4	101.0	-----	92.1	91.7	92.2
10	92.1	91.8	91.8	91.9	92.0	93.0	100.6	101.0	-----	92.1	91.7	92.2
11	92.1	91.8	91.8	91.9	92.0	93.2	100.7	100.8	-----	92.1	91.7	92.0
12	92.0	91.9	91.9	91.8	92.0	94.3	100.7	100.4	-----	92.1	91.7	92.1
13	92.0	91.8	91.9	91.8	92.0	95.0	100.8	100.3	-----	92.1	91.7	92.1
14	92.0	91.8	91.8	91.8	92.0	95.2	100.7	100.3	-----	92.1	91.7	92.0
15	92.0	91.8	91.7	91.8	92.0	95.4	100.7	100.2	-----	92.1	91.7	92.0
16	92.1	91.8	91.7	91.8	92.0	95.5	100.8	100.4	-----	92.1	91.8	92.0
17	92.1	91.8	91.8	91.8	92.1	95.6	100.9	100.3	-----	92.0	91.8	91.9
18	92.1	91.8	91.7	91.8	92.2	96.0	100.9	100.2	-----	91.9	91.8	91.8
19	92.1	91.8	91.7	91.8	92.3	96.7	100.9	100.1	-----	92.0	91.9	91.8
20	92.1	91.8	91.7	91.8	93.0	97.4	100.8	99.9	-----	92.0	92.0	91.8
21	92.1	91.8	91.7	91.7	93.6	97.5	100.7	99.7	-----	92.0	92.1	91.8
22	92.1	91.8	91.7	91.8	93.8	97.8	100.6	99.6	-----	91.9	92.1	91.8
23	92.1	91.8	91.7	91.8	93.9	98.2	100.4	-----	-----	91.8	92.2	92.0
24	92.1	91.8	91.7	91.7	93.8	98.4	100.2	-----	-----	91.9	92.2	92.1
25	92.1	91.9	-----	91.8	93.5	98.6	100.0	-----	-----	91.9	92.2	92.1
26	92.2	91.9	-----	91.8	93.4	98.6	99.9	-----	-----	91.9	92.2	92.1
27	92.1	91.9	-----	91.7	93.4	98.7	99.8	-----	-----	91.9	92.2	92.1
28	92.1	91.9	-----	91.8	93.4	98.6	99.8	-----	-----	91.9	92.2	92.1
29	92.1	91.9	-----	91.7	-----	98.5	99.7	-----	-----	91.9	92.3	92.1
30	92.0	91.9	-----	91.7	-----	98.2	99.8	-----	-----	92.0	92.2	92.2
31	92.0	-----	-----	91.7	-----	98.2	-----	-----	-----	92.0	92.2	-----
<i>1931-32</i>												
1	92.2	91.8	91.6	91.8	92.2	96.5	101.2	105.5	105.2	96.0	93.2	92.5
2	92.1	91.8	91.6	92.0	92.2	97.0	101.4	105.6	104.9	95.9	93.1	92.5
3	92.0	91.8	91.6	92.4	92.3	97.4	101.9	105.7	104.7	95.7	93.1	92.5
4	91.9	91.8	91.6	92.8	92.3	97.7	102.2	105.9	104.4	95.9	93.0	92.4
5	91.9	91.7	91.6	92.6	92.3	97.9	102.6	106.0	104.1	95.8	93.0	92.4
6	91.9	91.7	91.6	92.5	92.3	98.1	102.8	106.3	103.8	95.6	92.9	92.4
7	92.0	91.6	91.6	92.6	92.3	98.2	102.9	106.5	103.6	95.3	92.8	92.4
8	91.9	91.6	91.6	92.7	92.3	98.2	102.9	106.7	103.3	95.1	92.8	92.4
9	91.9	91.6	91.6	92.6	92.6	98.2	102.8	106.9	103.1	95.0	92.8	92.4
10	92.0	91.7	91.5	92.9	92.8	98.1	102.8	107.0	102.8	94.9	92.8	92.4
11	92.1	91.7	91.6	93.0	92.8	98.0	102.7	107.1	102.6	94.6	92.9	92.5
12	92.0	91.7	91.6	93.3	92.9	97.8	102.7	107.3	102.2	94.1	92.8	92.4
13	92.1	91.7	91.6	93.5	92.8	97.6	102.9	107.4	102.1	93.8	92.7	92.4
14	92.0	91.7	91.6	93.5	92.6	97.4	103.3	107.5	101.9	93.9	92.8	92.4
15	91.9	91.7	91.6	93.5	92.6	97.3	103.8	107.6	101.8	93.8	92.7	92.4
16	92.0	91.7	91.5	93.6	92.6	97.3	104.4	107.6	101.6	93.7	92.7	92.4
17	92.0	91.7	91.6	93.6	92.6	97.3	104.8	107.5	101.4	93.8	92.6	92.5
18	92.0	91.7	91.6	93.6	92.6	97.4	105.3	107.3	101.1	93.7	92.6	-----
19	92.0	91.7	91.6	94.0	92.4	97.8	105.5	107.1	101.0	93.8	92.6	-----
20	92.2	91.7	91.6	94.0	92.3	98.4	105.8	106.9	100.7	93.9	92.6	-----
21	92.3	91.7	91.6	94.1	92.5	99.0	106.0	106.8	100.5	93.6	92.6	-----
22	92.3	91.6	91.6	94.1	92.6	99.4	106.0	106.8	100.2	93.5	92.6	-----
23	92.2	91.6	91.6	93.8	92.6	99.6	106.0	107.0	99.9	93.4	92.6	-----
24	92.2	91.6	91.6	93.1	92.6	99.7	105.8	107.1	98.9	93.4	92.6	-----
25	92.2	91.6	91.6	93.0	92.9	99.9	105.5	107.2	98.2	93.3	92.6	-----
26	92.0	91.6	91.6	92.7	93.2	100.1	105.3	107.0	97.7	93.3	92.5	-----
27	92.0	91.6	91.6	92.6	93.9	100.2	105.3	106.8	97.3	93.3	92.5	-----
28	91.9	91.6	91.6	92.6	94.8	100.2	105.3	106.5	96.9	93.2	92.6	-----
29	91.8	91.6	91.6	92.5	95.8	100.4	105.4	106.2	96.2	93.2	92.5	-----
30	91.6	91.6	91.6	92.5	-----	100.7	105.5	105.9	96.2	93.2	92.6	-----
31	91.8	-----	91.7	92.3	-----	100.9	-----	105.5	-----	93.2	92.5	-----

110 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2) for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>1932-33</b>												
1		92.3	95.3	94.0	94.3		98.1	105.0			93.4	92.7
2		92.3	95.4	93.8	94.2		98.3	105.3			93.3	92.6
3		92.3	95.3	93.8			98.4	105.4			93.3	92.6
4		92.3	96.8	94.1			98.6	105.5			93.3	92.6
5		92.3	97.3	94.3			98.9	105.5			93.3	92.6
6		92.3	97.5	95.5			99.2	105.4			93.2	92.6
7		92.3	97.6	95.6			99.5	105.3		97.8	93.2	92.6
8		92.3	97.6	95.8			99.7	105.2		96.7	93.1	92.6
9		92.3	97.5	96.2			99.9	105.1		96.6	93.1	92.6
10		92.7	97.2	96.6			99.9	104.8		96.4	93.2	92.5
11		92.9	97.0	96.8			99.9	104.6		96.2	93.2	92.6
12		93.0	95.1	96.9			99.8	104.3		95.7	93.1	92.6
13		93.0	94.2	97.0			99.7	104.1		95.4	93.1	92.6
14		93.9	94.2	97.0			99.6	104.0		95.3	93.1	92.7
15		96.0	94.2	96.9			99.5	103.8		94.7	92.9	92.8
16		96.5	94.2	96.7			99.5	103.8		94.5	92.8	92.8
17		96.8	94.3	96.4			99.6	103.9		94.8	92.9	92.8
18		97.0	94.2	96.3		96.2	99.7	104.0		94.8	92.9	92.8
19		97.3	95.3	95.7		96.3	99.8	104.0		94.8	92.9	92.8
20		97.5	96.5	95.6		96.4	99.9	103.9		94.7	92.9	92.8
21		97.6	96.6	95.4		96.6	100.0	103.9		94.6	92.8	92.8
22		97.6	96.5	95.2		96.9	100.1	103.9		94.4	92.9	92.7
23		97.6	96.5	95.1		97.1	100.4			94.3	92.8	92.7
24		97.6	96.1	95.0		97.2	100.7			94.1	92.8	
25		97.4	95.2	95.0		97.2	101.2			93.6	92.8	
26		97.3	95.1	94.9		97.2	101.7			93.6	92.8	
27	92.4	97.2	95.0	94.8		97.2	102.3			93.7	92.7	
28	92.4	97.0	95.0	95.3		97.3	103.1			93.9	92.7	
29	92.4	96.5	94.7	94.9		97.4	103.8			93.8	92.6	
30	92.4	95.5	94.6	94.7		97.6	104.4			93.9	92.6	
31	92.4		94.4	94.4		97.9				93.5	92.7	
<b>1933-34</b>												
1		97.3	94.5	108.7	104.3	99.5	102.9	102.9	96.7	93.7		
2		97.4	94.5	108.4	104.1	99.4	103.8	102.8	96.6	93.6		
3		97.5	94.5	108.2	103.8	99.4	104.4	102.6	96.6	93.4		
4		98.0	94.5	108.1	103.6	99.6	104.8	102.4	96.3	93.3		
5		98.6	94.2	108.1	103.4	99.9	105.0	102.2	96.2	93.2		
6		98.9	94.2	108.2	103.2	100.1	105.0	102.0	96.2	93.0		
7	92.9	99.1	95.7	108.3	103.0	100.2	105.0	101.8	96.2	93.0		
8	92.9	99.2	97.1	108.3	102.9	100.4	104.9	101.6	96.1	93.1		
9	92.9	99.1	97.5	108.1	102.7	100.5	104.8	101.5	95.9	93.0		
10	92.9	99.0	97.9	107.8	102.5	100.0	104.7	101.3	95.9	93.0		
11	92.8	98.9	98.6	107.4	102.4	100.6	104.6	101.1		93.0		
12	92.8	98.7	99.8	107.0	102.2	100.6	104.5	101.0		93.3		
13	92.8	98.5	100.9	106.6	102.1	100.6	104.4	101.0		93.2		
14	92.8	98.3	101.9	106.2	102.0	100.6	104.3	100.7		93.0		
15	92.8	98.1	102.8	105.8	101.8	100.6	104.3	100.6		93.2		
16	92.8	97.5	103.6	105.3	101.6	100.6	104.3	100.3		93.2		
17	92.7	96.5	103.8	105.0	101.5	100.7	104.2	100.2		93.2		
18	92.7	96.1	104.0	104.6	101.3	100.7	104.1	99.1		93.3		
19	92.7	96.0	104.1	104.2	101.2	100.8	104.0	98.8		93.2		
20	92.9	95.8	104.4	104.0	100.9	100.9	103.7	98.6		93.2		
21	93.0	95.5	104.9	103.7	100.8	100.9	103.6	98.5		93.2		
22	93.2	95.4	105.3	103.6	100.7	100.9	103.4	98.4	93.7	93.2		
23	93.7	94.9	106.1	103.6	100.5	100.9	103.3	98.0	93.6	92.9		
24	94.6	94.7	107.7	103.7	100.3	100.9	103.2	97.4	93.5	92.9		
25	95.3	94.8	108.4	104.2	100.1	100.9	103.2	97.0	93.4	92.9		
26	95.9	94.8	110.2	104.6	100.0	100.8	103.2	96.6	93.4			
27	96.0	94.7	110.4	104.8	99.8	100.8	103.2	96.4	95.1			
28	96.1	94.7	110.3	104.9	99.7	100.8	103.1	96.3	94.4			
29	96.2	94.6	109.9	104.8		100.8	103.1	96.2	94.2			
30	96.4	94.6	109.6	104.6		101.1	103.0	96.2	93.7			
31	97.0		109.1	104.4		102.0		96.4				

Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1934-35</i>												
1			95.5	96.6		96.7	98.4	104.5	103.9			93.4
2			95.5	96.5	97.3	96.7	98.3	104.5	103.8			93.4
3			95.5	95.4	97.3	96.7	98.2	104.6	103.5			93.4
4			95.4	95.6	97.3	96.7	98.2	104.8	103.3			93.4
5			95.4	95.5	97.3	96.7	98.1	104.8	103.0			93.4
6		94.3	95.4	95.7	97.4	96.7	98.1	104.7	102.7			93.5
7		95.1	95.4	96.0	97.3	96.6	98.0	104.7	102.6			93.5
8		95.6	94.8	96.2	97.3	96.1	98.0	105.0	102.4			93.6
9		95.8	94.7	96.3	97.3	96.1	97.9	105.1	102.2			93.6
10		95.9	94.6	96.3	97.3	96.0	98.0	105.1	102.0			93.6
11		96.0	94.1	96.3	97.2	96.0	98.1	105.2	101.7			93.6
12		96.0	93.9	96.3	97.1	96.0	98.2	105.1	101.5			93.6
13		96.0	94.4	96.2	97.1	96.5	98.6	105.0	101.4			93.7
14		95.9	94.4	96.2	97.0	96.9	99.1	104.8	101.3			93.7
15		95.6	94.4	96.0	96.9	97.7	99.7	104.7	101.1		93.1	93.7
16		95.2	94.4	95.9	96.8	98.3	100.3	104.6	100.9		93.2	93.6
17		94.5	94.4	96.0	96.7	98.6	100.8	104.5	100.3		93.2	93.6
18		94.7	94.4	95.9	96.6	98.8	101.3	104.5	99.1		93.4	93.6
19		94.7	93.5	95.8	96.5	99.0	101.6	104.4			93.4	93.5
20		94.7	93.4	95.7	96.4	99.0	102.0	104.4			93.4	93.5
21			94.2	95.6	96.4	99.0	102.3	104.4			93.3	93.5
22			95.1	95.5	96.4	99.0	102.8	104.4			93.3	93.5
23			96.3	95.6	96.5	98.9	103.2	104.5			93.4	93.5
24			96.8	95.9	96.6	98.8	103.5	104.5			93.5	93.5
25			96.9		96.7	98.8	103.7	104.7			93.5	93.7
26			97.0		96.7	98.8	103.9	104.7			93.5	93.6
27			97.0		96.7	98.7	103.9	104.6			93.6	93.7
28			97.0		96.7	98.6	104.1	104.5			93.6	93.7
29			96.9			98.6	104.3	104.3			93.5	93.7
30			96.8			98.5	104.4	104.1			93.4	93.7
31			96.8			98.4		104.0			93.4	
<i>1935-36</i>												
1	93.7	93.3	92.7	92.6	93.4		95.9	107.1	101.1			92.9
2	93.7	93.2	92.6	92.5	93.4	93.2	95.8	107.2	100.8			93.1
3	93.7	93.2	92.6	92.5	93.4	93.2	95.7	106.8	100.7			93.1
4	93.8	93.2	92.6	92.4	93.4	94.4	95.4	106.7	100.6			93.1
5	93.8	93.1	92.6	92.4	93.3	95.0	95.3	106.6	99.4			93.0
6	93.8	93.1	92.7	92.5	93.3	95.2	95.3	106.6	98.9			92.9
7	93.8	92.8	92.8	92.5	93.4	95.3	95.2	106.5	97.7		92.5	92.9
8	93.7	92.8	92.8	92.5	93.4	95.5	95.1	106.4	97.3		92.5	92.9
9	93.6	92.8	92.7	92.7	93.4	96.3	95.1	106.2	97.9		92.5	92.9
10	93.6	92.8	92.8	92.7	93.4	96.5	95.1	105.9	99.1		92.5	92.8
11	93.5	92.8	92.7	92.8	93.4	96.6	95.4	105.7	99.3		92.5	92.8
12	93.5	92.7	92.7	92.8	93.6	96.7	95.7	105.4	99.2		92.6	92.8
13	93.5	92.7	92.7	92.7	93.5	96.8	96.3	105.2	98.7		92.6	92.7
14	93.4	92.7	92.7	92.8	93.6	96.9	97.3	105.1	98.5		92.6	92.9
15	93.4	92.7	92.6	92.9	93.5	96.9	98.2	105.1	98.4		92.6	93.0
16	93.4	92.6	92.6	93.4	93.5	96.8	99.1	105.1	97.7		92.6	93.0
17	93.4	92.7	92.6	93.5	93.6	96.7	99.9	105.0	96.9		92.7	92.9
18	93.4	92.6	92.7	93.6	93.6	96.7	100.8	104.8	96.4		92.6	92.8
19	93.4	92.6	92.8	93.2	93.6	96.6	101.6	104.8	96.4		92.8	92.8
20	93.4	92.7	92.8	93.2	93.6	96.5	102.5	104.4	96.4		92.7	92.8
21	93.3	92.8	92.8	93.6	93.7	96.5	103.4	104.2	96.6		92.7	92.8
22	93.3	92.9	92.8	93.6	93.9	96.5	104.1	103.9	96.3		92.7	92.8
23	93.3	92.9	92.8	93.7		96.5	104.6	103.5	95.7		92.8	92.8
24	93.3	92.8	92.8	93.7		96.5	105.2	103.2			92.7	92.8
25	93.3	92.8	92.8	93.7		96.4	105.8	102.9			92.9	92.8
26	93.3	92.5	92.8	93.7		96.4	106.3	102.5			92.9	92.8
27	93.3	92.6	92.7	93.7		96.4	106.7	102.2			93.0	92.8
28	93.3	92.6	92.8	93.4		96.3	107.0	102.0			93.0	92.8
29	93.3	92.7	92.5	93.4		96.2	107.2	101.8			92.9	92.9
30	93.3	92.7	92.3	93.4		96.2	107.2	101.4			92.8	92.9
31	93.3		92.4	93.4		96.1		101.3			92.8	

112 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<b>1936-37</b>												
1	92.9	92.8	92.3	92.0	92.7	92.6	96.0	102.5	102.3	95.6	92.9	93.3
2	92.9	92.5	92.2	92.1	92.7	92.6	96.4	102.5	101.9	95.2	92.8	93.2
3	92.9	92.5	92.2	92.1	92.7	92.7	96.8	102.5	101.7	95.1	92.8	93.3
4	92.9	92.5	92.3	92.2	92.7	92.7	97.1	102.7	101.4	94.6	92.8	93.3
5	93.0	92.5	92.3	92.1	92.6	92.7	97.3	103.1	101.3	94.5	92.8	93.5
6	93.0	92.3	92.3	92.1	92.4	92.7	97.3	103.4	101.1	94.4	92.8	93.4
7	93.0	92.3	92.3	92.4	92.5	92.7	97.4	103.8	100.8	94.2	92.8	93.5
8	93.0	92.4	92.3	92.5	92.4	92.8	97.4	104.0	100.5	94.1	92.9	93.5
9	93.0	92.3	92.3	92.7	92.6	92.9	97.4	104.1	100.3	94.0	92.9	93.5
10	93.0	92.3	92.2	92.7	92.7	93.0	97.5	104.2	98.3	94.0	92.9	93.5
11	93.0	92.2	92.1	92.8	92.8	93.1	97.7	104.2	98.5	93.9	93.0	93.4
12	92.9	92.2	92.2	92.9	92.6	93.1	97.8	104.2	98.9	93.8	93.2	93.5
13	92.9	92.2	92.2	93.0	92.5	93.2	97.8	104.4	98.1	93.6	93.0	93.5
14	92.9	92.2	92.2	93.0	92.4	93.4	98.1	104.2	97.6	93.7	93.1	93.5
15	93.0	92.1	92.2	93.0	92.3	93.3	98.7	104.2	96.7	93.7	93.0	93.4
16	92.8	92.2	92.2	92.9	92.4	93.7	99.6	104.2	97.1	93.9	92.9	93.5
17	92.9	92.2	92.2	92.8	92.3	93.6	100.3	104.2	98.1	93.8	92.8	93.5
18	92.9	92.2	92.2	92.9	92.2	93.9	100.7	104.2	97.3	93.7	92.8	93.5
19	92.8	92.2	92.2	92.9	92.4	93.9	100.9	104.1	97.1	93.6	92.9	93.6
20	92.9	92.2	92.1	92.8	92.4	94.0	101.0	104.1	96.8	93.2	93.0	93.4
21	92.9	92.2	92.1	92.8	92.4	94.1	101.2	103.9	96.9	93.2	93.1	93.5
22	93.0	92.3	92.1	92.7	92.5	94.2	101.5	103.8	97.2	93.0	93.0	93.4
23	93.0	92.3	92.1	92.8	92.5	94.2	101.9	103.6	97.7	92.9	93.1	93.4
24	93.1	92.2	92.0	92.8	92.5	94.3	102.0	103.4	97.7	93.1	93.2	93.2
25	93.1	92.1	92.0	92.8	92.8	94.0	102.1	103.3	97.0	92.9	93.2	93.1
26	93.1	92.0	92.0	92.8	92.9	94.3	102.0	103.1	96.5	92.9	93.3	93.2
27	93.0	92.0	92.0	92.8	92.7	94.8	102.1	103.0	95.9	92.8	93.3	93.2
28	93.0	92.0	91.9	92.8	92.6	95.3	102.2	102.9	95.8	92.9	93.3	93.2
29	93.1	92.1	92.0	92.7	92.5	95.5	102.4	102.8	95.6	92.9	93.3	93.1
30	92.9	92.3	92.0	92.7	92.5	95.7	102.6	102.7	95.6	92.9	93.3	93.3
31	92.8	92.0	92.0	92.7	92.5	95.8	102.7	102.7	92.9	93.3	93.3	93.3
<b>1937-38</b>												
1	93.1	93.6	95.9	97.8	97.9	97.9	99.86	106.22	102.20	94.88	93.47	93.47
2	93.0	93.3	94.8	97.9	97.9	97.9	99.69	106.23	102.09	94.89	93.52	93.52
3	93.1	93.3	94.6	97.8	97.8	97.8	99.58	106.32	101.91	95.04	93.55	93.55
4	93.0	93.3	94.4	97.8	97.8	97.8	99.43	106.28	101.75	95.16	93.70	93.70
5	92.8	93.3	94.4	97.6	97.6	97.6	99.38	106.13	101.57	95.24	93.62	93.62
6	92.8	93.3	94.4	97.3	97.3	97.3	99.34	105.87	101.38	95.19	93.68	93.68
7	92.8	93.3	94.3	97.2	97.2	97.2	99.26	105.57	101.17	95.02	93.66	93.66
8	92.8	93.3	94.0	96.7	96.7	96.7	99.38	105.31	101.10	95.07	93.67	93.67
9	92.9	93.3	96.2	96.2	96.2	96.2	99.46	104.88	101.01	95.01	93.57	93.57
10	92.8	93.3	96.1	96.1	96.1	96.1	99.66	104.54	100.64	94.92	93.53	93.53
11	92.6	93.3	96.0	96.0	96.0	96.0	99.86	104.33	100.05	94.88	93.50	93.50
12	92.6	93.1	95.1	95.1	95.1	95.1	99.91	104.04	98.90	94.89	93.46	93.46
13	92.6	93.1	95.0	95.0	95.0	95.0	100.27	103.77	98.45	94.85	93.46	93.46
14	92.6	93.0	95.4	95.4	95.4	95.4	100.39	103.61	97.82	94.82	93.45	93.45
15	92.5	92.9	95.4	95.4	95.4	95.4	100.56	103.46	97.62	94.82	93.43	93.43
16	92.4	92.9	96.9	96.9	96.9	96.9	100.76	103.35	96.59	94.82	93.49	93.49
17	92.4	92.9	96.7	97.5	97.5	97.5	100.99	103.36	97.17	94.82	93.49	93.49
18	92.5	93.1	95.0	97.9	97.9	97.9	99.4	101.48	103.32	98.27	93.42	93.42
19	92.5	93.1	95.1	98.1	98.1	98.1	99.6	102.68	103.17	97.99	93.40	93.40
20	92.6	92.9	95.2	98.1	98.1	98.1	99.9	104.20	102.91	97.81	93.40	93.40
21	92.8	92.8	95.2	98.2	98.2	98.2	100.0	105.42	102.89	97.49	93.44	93.44
22	92.6	92.8	95.2	98.2	98.2	98.2	100.1	105.88	102.78	96.87	93.49	93.49
23	92.8	92.7	95.1	98.2	98.2	98.2	100.0	106.17	102.63	96.75	93.52	93.52
24	92.9	92.7	95.4	98.2	98.2	98.2	100.0	106.40	102.52	96.68	93.45	93.45
25	93.0	92.8	95.4	98.2	95.4	100.0	106.44	102.51	96.60	93.38	93.47	93.47
26	93.0	92.8	95.3	98.1	95.5	100.18	106.47	102.45	96.57	93.41	93.51	93.51
27	93.1	93.3	95.3	98.0	97.7	100.14	106.42	102.59	96.37	93.38	93.49	93.49
28	93.2	94.9	95.2	97.7	97.7	100.09	106.33	102.60	95.92	93.35	93.60	93.60
29	93.2	95.7	96.6	97.7	97.7	100.04	106.23	102.62	95.38	93.40	93.59	93.59
30	93.2	96.4	97.1	97.1	97.1	99.95	106.22	102.57	94.89	93.44	93.66	93.66
31	93.3	97.6	97.6	97.6	97.6	99.91	106.22	102.38	94.89	93.44	93.66	93.66

Daily water level at noon in well 25/43-11K1 (city of Spokane "gage well" No. 2)  
for water years ending September 30—Continued

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
<i>1938-39</i>												
1.....	93.64	93.60	93.38									
2.....	93.60	93.18	93.46									
3.....	93.66	93.48	93.34									
4.....	93.85	93.35	93.17									
5.....	93.63	93.43	93.12									
6.....	93.71	93.43	93.05									
7.....	93.65	93.40	93.03									
8.....	93.69	93.48	93.00									
9.....	93.55	93.50	92.91									
10.....	93.69	93.42	92.95									
11.....	93.72	93.43	93.06									
12.....	93.85	93.45	93.01									
13.....	93.77	93.41	93.08									
14.....	93.68	93.38	93.11									
15.....	93.66	93.48	93.10									
16.....	93.53	93.45	93.12									
17.....	93.49	93.43	93.16									
18.....	93.52	93.46	93.04									
19.....	93.48	93.41	93.18									
20.....	93.53	93.38	93.17									
21.....	93.51	93.37	93.18									
22.....	93.63	93.41	93.06									
23.....	93.65	93.28	92.95									
24.....	93.51	93.23	93.23									
25.....	93.52	93.23	93.08									
26.....	93.61	93.22	93.07									
27.....	93.50	93.26	93.08									
28.....	93.48	93.29	93.03									
29.....	93.50	93.40	92.84									
30.....	93.47	93.39	92.88									
31.....	93.53		92.84									

Well 25/43-14K1 (Washington Water Power Co. No. 3)

OWNER.—Ohio Match Co., Spokane, Wash.

LOCATION.—In the NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 14, T. 25 N., R. 43 E., about 170 feet south of Broadway extended and 95 feet east of center of section, in sub-basement of southwest building of match factory.

DESCRIPTION.—Industrial dug well, 83 feet deep and 3.5 feet in diameter, open-bottom concrete casing. Centrifugal pump.

MEASURING POINT.—Top inside edge of concrete parapet, which is 1.0 foot above concrete floor and about 0.8 foot below land surface; 1,943.16 feet above city datum and 1,926.60 feet above sea-level datum of 1929.

BENCH MARKS.—About 150 feet north and somewhat west of well and 15 feet from northwest corner of office building, in top northwest angle of curb, a copper nail with washer; 1,928.80 feet above sea-level datum of 1929. Within well, top east end of second ladder rung from top; 1,924.43 feet above sea-level datum of 1929.

WATER LEVELS.—First measured November 22, 1920. Lowest and highest levels yet recorded (both static), January 29, 1931, and May 23, 1932, respectively; range 14.65 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,812.22 feet above city datum and 1,795.66 feet above sea-level datum of 1929.

## Water levels in well 25/43-14K1 (Washington Water Power Co. No. 3)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1920</i>		<i>1931</i>		<i>1933-Con.</i>		<i>1933-Con.</i>	
Nov. 22	83.74	Jan. 29	81.07	July 18	85.11	June 22	86.36
<i>1928</i>		Feb. 24	82.41	Aug. 28	82.44	Aug. 20	82.72
Mar. 22	88.84	Mar. 24	86.10	Oct. 11	82.52	Oct. 7	82.86
<i>1929</i>		Apr. 27	88.90	Nov. 27	84.44	Nov. 27	82.06
Apr. 13	84.67	May 26	87.46	<i>1934</i>		<i>1937</i>	
July 1	84.06	June 25	83.65	Jan. 24	93.03	Jan. 27	82.59
July 30	82.24	July 27	81.99	Mar. 14	89.70	Apr. 12	81.88
Aug. 29	82.34	Aug. 26	81.59	Apr. 30	82.17	June 7	90.81
Oct. 5	82.20	Oct. 7	81.59	June 18	84.45	July 6	84.94
Nov. 6	81.93	28	81.44	Aug. 7	82.70	Sept. 3	83.52
Dec. 2	81.56	Dec. 8	81.14	Oct. 5	82.36	Nov. 9	83.34
<i>1930</i>		<i>1932</i>		Nov. 20	84.14	Dec. 23	86.28
Jan. 9	81.36	Jan. 11	81.95	<i>1935</i>		<i>1938</i>	
Feb. 17	81.78	Feb. 10	82.05	Jan. 18	85.19	Jan. 22	87.21
Mar. 17	82.56	Mar. 21	86.96	Mar. 15	85.97	Mar. 18	87.66
May 12	86.90	Apr. 25	94.11	May 1	92.36	Apr. 12	88.70
June 11	85.31	May 23	95.72	June 27	86.32	Apr. 27	94.17
July 8	82.71	July 15	84.24	Aug. 15	82.74	May 19	92.34
Aug. 18	81.84	Nov. 25	86.14	Oct. 1	83.33	June 8	89.65
Sept. 18	81.70	<i>1933</i>		Nov. 18	82.20	June 30	85.99
Oct. 22	81.48	Mar. 16	84.50	Oct. 30	81.55	July 13	84.96
Nov. 19	81.24	May 4	93.24	Nov. 30	83.11	Aug. 5	83.74
Dec. 22	81.21	June 13	93.69	Dec. 30	94.69	Aug. 26	83.37
				<i>1936</i>		Sept. 17	83.64
						Oct. 17	83.48
						Nov. 15	83.24
						Dec. 8	83.12

<sup>1</sup> Pump operating in well.

## Well 25/43-17D1 (Washington Water Power Co. No. 88)

OWNER.—New Method Laundry, Spokane, Wash.

LOCATION.—In the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 17, T. 25 N., R. 43 E., about 140 feet south and 85 feet west of center of intersection of Mission Avenue and Pearl Street, outside and near southwest corner of laundry.

DESCRIPTION.—Dug well, 62.5 feet deep and 30 inches in diameter, open-bottom brick casing. Centrifugal pump.

MEASURING POINTS.—Floor of pump station, which is level with top of inner brick casing and 42.4 feet below land surface; 1,866.82 feet above sea-level datum of 1929. Bottom of plank cover, marked by copper nail with washer, level with top of outer brick curb and land surface; 1,979.20 feet above datum. Top of concrete coping of well, west side; 1,908.65 feet above datum.

BENCH MARK.—About 125 feet northwest of well, along south side of Mission Avenue, on top face of concrete curb, a chiseled square; 1,908.31 feet above sea-level datum of 1929.

WATER LEVELS.—First measured April 16, 1928. Lowest and highest levels yet recorded (both static), February 7, 1931, and December 1933, respectively; range, 10.92 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,812.92 feet above city datum and 1,796.36 feet above sea-level datum of 1929.

## Water levels in well 25/43-17D1 (Washington Water Power Co. No. 88)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1931—Con.</b>		<b>1934</b>		<b>1937</b>	
Apr. 16.....	68.3	Mar. 31.....	1 64.73	Jan. 24.....	70.11	Jan. 27.....	1 62.95
<b>1929</b>		Apr. 30.....	66.84	Mar. 14.....	67.79	Apr. 12.....	1 64.96
Apr. 15.....	1 64.05	May 28.....	1 65.96	Apr. 30.....	69.16	June 8.....	68.52
July 1.....	64.53	July 2.....	1 63.91	June 20.....	65.13	July 7.....	65.56
July 30.....	1 63.19	Aug. 28.....	63.21	Aug. 7.....	63.81	Sept. 7.....	64.13
Aug. 29.....	1 62.92	Oct. 13.....	1 62.96	Oct. 5.....	63.35	Nov. 9.....	63.81
Oct. 5.....	62.87	Oct. 30.....	1 62.28	Nov. 21.....	1 63.62	Dec. 21.....	65.12
Nov. 7.....	1 62.32	Dec. 10.....	1 62.09	<b>1935</b>		<b>1938</b>	
Dec. 5.....	62.07	Dec. 10.....	1 62.04	Jan. 18.....	65.43	Jan. 22.....	65.96
<b>1930</b>		<b>1932</b>		Mar. 15.....	65.10	Mar. 18.....	66.11
Jan. 14.....	62.14	Jan. 13.....	1 62.44	Apr. 29.....	69.08	Apr. 12.....	67.18
Feb. 21.....	1 62.34	Feb. 12.....	1 62.55	June 26.....	66.66	27.....	70.46
Mar. 18.....	62.98	Mar. 23.....	1 65.64	Aug. 16.....	63.84	May 19.....	69.69
May 13.....	65.97	Apr. 25.....	1 70.66	Oct. 1.....	64.13	June 8.....	68.61
June 12.....	1 65.00	May 24.....	72.06	Nov. 19.....	63.00	30.....	1 66.12
July 8.....	63.65	July 16.....	65.41	Dec. 31.....	1 62.26	July 13.....	65.42
Aug. 19.....	1 62.56	Nov. 28.....	1 65.08	<b>1936</b>		Aug. 5.....	1 65.41
Sept. 19.....	62.62	<b>1933</b>		Feb. 21.....	63.19	26.....	1 64.09
Oct. 28.....	62.18	Mar. 17.....	64.38	Apr. 30.....	70.50	Sept. 17.....	1 63.91
Nov. 19.....	62.01	May 4.....	1 69.71	June 22.....	1 66.04	Oct. 17.....	1 63.70
Dec. 24.....	61.86	June 14.....	71.21	Aug. 20.....	1 63.95	Nov. 15.....	1 63.74
<b>1931</b>		July 18.....	1 66.06	Oct. 8.....	1 63.46	Dec. 8.....	1 63.36
Feb. 7.....	61.64	Aug. 28.....	63.97	Nov. 28.....	63.13		
25.....	62.01	Oct. 11.....	63.38				
		Nov. 27.....	64.88				
			1 72.56				

<sup>1</sup> Pump operating in well.

<sup>2</sup> High-water mark in well caused by record freshet of Spokane River in December 1933.

## Well 25/44-2B1 (Washington Water Power Co. No. 49)

OWNER.—Trentwood Irrigation District.

LOCATION.—In the NW¼NE¼ sec. 2, T. 25 N., R. 44 E., 0.15 mile north of Trent Road, 0.2 mile south of county road west, and about 25 feet west of a lane.

DESCRIPTION.—Public-supply dug well, 127 feet deep and 6 feet in diameter, open-bottom concrete casing. Centrifugal pump.

MEASURING POINT.—Top inside edge of concrete parapet, northeast side, marked by chiseled arrow, 1.5 feet above land surface; 2,036.80 feet above sea-level datum of 1929.

BENCH MARK.—About 50 feet south of well, on top face of northeast concrete footing of water tank, a chiseled square; 2,039.84 feet above sea-level datum of 1929.

WATER LEVELS.—First measured March 9, 1928. Lowest and highest levels yet recorded (both pumping levels), November 20, 1930, and May 31, 1932, respectively; range, 21.05 feet. Draw-down probably not more than 2 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,896.54 feet above sea-level datum of 1929.

## Water levels in well 25/44-2B1 (Washington Water Power Co. No. 49)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1931—Con.</b>		<b>1934</b>		<b>1937</b>	
Mar. 9	39.26	Apr. 30	38.85	Jan. 24	147.61	Jan. 27	134.30
<b>1929</b>		May 28	139.38	Mar. 15	145.26	Apr. 13	139.16
Mar. 21	32.77	June 29	136.74	May 2	147.39	June 8	145.43
June 29	39.51	July 28	133.63	June 20	142.28	July 6	142.46
July 29	37.05	Aug. 28	133.10	Aug. 8	139.81	Sept. 7	138.46
Aug. 29	136.77	Oct. 7	33.56	Oct. 4	138.06	Nov. 10	136.46
Oct. 8	135.20	28	128.63	Nov. 21	138.52	Dec. 21	138.01
Nov. 7	134.82	Dec. 10	32.26	<b>1935</b>		<b>1938</b>	
Dec. 3	133.92	<b>1932</b>		Jan. 18	139.36	Jan. 21	139.64
<b>1930</b>		Jan. 15	131.63	Mar. 15	139.96	Mar. 19	40.32
Feb. 21	132.41	15	33.49	Apr. 29	144.53	19	139.94
Mar. 18	133.12	Feb. 11	129.47	June 26	144.40	Apr. 12	141.56
May 13	139.10	11	31.48	Aug. 16	139.66	27	45.35
June 13	138.29	Mar. 23	38.17	Oct. 2	138.53	May 19	145.31
July 8	36.95	Apr. 26	44.06	Nov. 18	136.33	June 8	45.69
Aug. 19	35.86	May 31	148.15	Dec. 31	134.61	30	142.74
Sept. 19	134.29	July 16	140.61	<b>1936</b>		July 13	140.87
Oct. 22	129.39	Nov. 26	38.46	Feb. 21	136.71	Aug. 5	139.26
Nov. 20	127.10	<b>1933</b>		May 1	146.06	26	39.31
Dec. 23	29.03	Mar. 17	38.04	June 22	143.73	Sept. 17	138.76
<b>1931</b>		May 4	143.58	Aug. 22	138.83	Oct. 17	137.19
Jan. 30	129.82	June 13	146.95	Oct. 6	137.46	Nov. 14	37.47
Feb. 24	131.81	July 15	142.87	Nov. 27	134.93	Dec. 8	135.90
Mar. 31	36.83	Aug. 28	138.06				
		Oct. 11	136.39				
		Nov. 27	138.23				

<sup>1</sup> Pump operating in well.

<sup>2</sup> Pump stopped immediately before measuring water level.

## Well 25/44-10Q1 (Washington Water Power Co. No. 19)

OWNER.—Jerry Mossell. Formerly owned by G. R. Pierson.

LOCATION.—In the SW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 10, T. 25 N., R. 44 E., about 515 feet south of county road east, 365 feet east of T-road north, and 9 feet east of property-line fence.

DESCRIPTION.—Domestic and stock dug well, initially 60.0 feet deep and 3 feet in diameter, open-bottom brick casing; about 1931 depth increased to about 65 feet. Hand-operated lift pump.

MEASURING POINT.—Top of concrete collar, south side, level with land surface; 1,980.18 feet above sea-level datum of 1929.

BENCH MARK.—About 95 feet south and 20 feet east of well, at concrete head box of flume, on top of west weir-board buttress, a chiseled square; 1,994.72 feet above sea-level datum of 1929.

WATER LEVELS.—First measured November 19, 1920. Lowest and highest levels yet recorded, December 8, 1931, and May 23, 1932, respectively; range, 14.28 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,894.93 feet above sea-level datum of 1929.

## Water levels in well 25/44-10Q1 (Washington Water Power Co. No. 19)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1920</b>		<b>1931—Con.</b>		<b>1934</b>		<b>1937</b>	
Nov. 19.....	27.85	Mar. 26.....	29.30	Jan. 24.....	38.72	Apr. 12.....	31.35
		Apr. 27.....	32.03	Mar. 14.....	35.97	June 7.....	36.25
<b>1928</b>		May 26.....	31.27	Apr. 30.....	38.17	July 6.....	31.50
Mar. 21.....	33.65	June 30.....	28.39	June 18.....	31.60	Sept. 3.....	29.09
		July 27.....	27.25	Aug. 7.....	29.02	Nov. 9.....	28.53
<b>1929</b>		Aug. 26.....	26.51	Oct. 5.....	28.64	Dec. 23.....	30.78
Mar. 21.....	26.76	Oct. 7.....	26.40	Nov. 20.....	29.43		
June 29.....	30.03	27.....	26.03			<b>1938</b>	
July 30.....	27.70	Dec. 8.....	25.36	<b>1935</b>		Jan. 22.....	31.67
Aug. 23.....	27.46			Jan. 18.....	30.84	Mar. 22.....	32.93
Oct. 4.....	27.43	<b>1932</b>		Mar. 15.....	31.43	Apr. 12.....	33.65
Nov. 6.....	26.80	Jan. 11.....	25.95	Apr. 29.....	36.49	July 27.....	37.37
Dec. 2.....	26.61	Feb. 10.....	26.65	June 27.....	33.25	May 19.....	37.10
<b>1930</b>		Mar. 21.....	30.18	Aug. 15.....	29.23	June 9.....	36.09
Jan. 10.....	26.29	Apr. 25.....	36.37	Oct. 1.....	29.39	30.....	32.25
Feb. 17.....	(1)	May 23.....	39.64	Nov. 18.....	27.67	July 13.....	31.06
Mar. 17.....	27.15	July 15.....	30.95	Dec. 30.....	26.97	Aug. 5.....	29.74
May 12.....	30.88	Nov. 25.....	30.25			26.....	29.23
June 11.....	29.82	<b>1933</b>		<b>1936</b>		Sept. 17.....	29.40
July 9.....	27.59	Mar. 16.....	29.41	Apr. 30.....	38.00	Oct. 17.....	28.98
Aug. 18.....	(2)	May 4.....	36.55	June 22.....	32.95	Nov. 14.....	28.65
<b>1931</b>		June 13.....	38.51	Aug. 20.....	28.92	Dec. 8.....	28.10
Jan. 29.....	(?)	July 18.....	32.15	Oct. 7.....	28.72		
Feb. 24.....	26.39	Aug. 28.....	28.69	Nov. 27.....	27.47		
		Oct. 11.....	28.20				
		Nov. 27.....	30.10				

1 Well dry.

2 Well dry; 6 readings in period.

## Well 25/44-12Q1 (Washington Water Power Co. No. 32)

OWNER.—Inland Empire Paper Co., Millwood, Wash. E. E. Thacker, renter.

LOCATION.—In the SW¼SE¼ sec. 12, T. 25 N., R. 44 E.

DESCRIPTION.—Dug well, 22 feet deep and 3 feet square, open-bottom wood cribbing.

MEASURING POINT.—Top of 4- by 12-inch plank, 6.87 feet below land surface; 1,956.13 feet above approximate sea-level datum.

BENCH MARK.—None.

WATER LEVELS.—First measured December 1, 1920. Lowest and highest static levels yet recorded, August 23, 1929, and June 28, 1929, respectively; range, 2.70 feet.

Measurements by the Washington Water Power Co. Measurements given in feet above a local datum, which is 1,900.00 feet above approximate sea-level datum.

## Water levels in well 25/44 12Q1 (Washington Water Power Co. No. 32)

Date	Water level	Date	Water level
<b>1920</b>		<b>1929—Con.</b>	
Dec. 1.....	44.83	July 29.....	42.62
		Aug. 23.....	42.25
<b>1929</b>		Oct. 4.....	(1)
Apr. 4.....	44.22		
June 28.....	44.95		

1 Discontinued as observation well.

## Well 25/44-15E1 (Washington Water Power Co. No. 15, owner's No. 5)

OWNER.—Modern Electric Water Co., Opportunity, Wash.

LOCATION.—In the SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 15, T. 25 N., R. 44 E., about 610 feet north and 55 feet east of center of intersection of Broadway and Pines Avenue, which is the west quarter corner of sec. 15.

DESCRIPTION.—Irrigation and public-supply dug well, 146 feet deep and 7 feet in diameter, open-bottom concrete casing. Three centrifugal pumps with respective capacities of 5,000, 1,200, and 800 gallons a minute.

MEASURING POINT.—Top of inside edge of concrete collar, west side, 0.5 foot above land surface; 2,052.67 feet above sea-level datum of 1929.

BENCH MARK.—None.

WATER LEVELS.—First measured May 21, 1914. Lowest level yet recorded, August 26, 1931, pumping 7,000 gallons a minute; highest, May 23, 1932, pumping 800 gallons a minute; range, 16.79 feet. Draw-down about 5.5 feet, pumping 7,000 gallons a minute.

Measurements prior to December 5, 1929, by owner, except on November 12, 1920, March 21, 1928, and March 21, 1929, when they were made by the Washington Water Power Co. Those from December 5, 1929, to March 18, 1938, by Washington Water Power Co.; thereafter alternately by Washington Water Power Co. and Geological Survey. Measurements given in feet above a local datum, which is 1,895.47 feet above sea-level datum of 1929.

*Water levels in well 25/44-15E1 (Washington Water Power Co. No. 15, owner's No. 5)*

Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>
<i>1914</i>			<i>1927</i>			<i>1929—Cor.</i>		
May 21	31.7		May 10		27.8	July 1		19.7
21		26.2	June 1		28.3	15		18.5
June 11		23.7	17	30.0		Aug. 1		17.7
28	24.3		20		28.2	15		16.6
28		20.5	July 1		25.7	31		16.6
July 20		20.3	15		24.3	Sept. 1	19.6	
Aug. 5		19.2	Aug. 7		21.7	Dec. 5		20.12
15		18.3	15		21.3			
25		17.8	31		20.2	<i>1930</i>		
31	22.0		Sept. 1	22.3		Jan. 10		19.51
31		17.7				Feb. 17		19.71
<i>1915</i>			<i>1928</i>			Mar. 17		20.45
Jan. 8	21.0		Mar. 21	26.98		May 12		22.35
15	21.5		May 10		29.2	June 11		20.86
<i>1920</i>			30		30.1	July 8		17.78
Nov. 12	20.70		June 15		27.0	Aug. 18		16.33
<i>1926</i>			30		24.6	Sept. 18	19.41	
May 31		21.5	July 15		22.8	Oct. 22	19.66	
June 21	22.5		30		21.8	Nov. 19		19.26
27		20.0	Aug. 15		21.0	Dec. 22		18.85
July 1		19.7	31		20.4	<i>1931</i>		
15		19.0	Sept. 1	23.0		Jan. 29		18.50
Aug. 1		18.7	<i>1929</i>			Feb. 25		19.05
15		18.7	Mar. 21	20.55		Mar. 26		21.63
31		18.5	May 7		21.6	Apr. 27		25.02
Sept. 1	20.4		30		23.7	May 26		22.82
			June 15		21.9	June 25		19.45

<sup>1</sup> One or more of three pumps operating.

## Water levels in well 25/44-15E1 (Washington Water Power Co. No. 15, owner's No. 5)—Continued

Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>
1931—Con.			1934			1937		
July 27		18.04	Jan. 24		32.33	Jan. 27		20.46
Aug. 26		15.85	Mar. 14		29.47	Apr. 12		20.28
Oct. 7		19.45	Apr. 30		31.58	June 7		27.20
Oct. 27		19.15	June 18		22.64	July 6		21.98
Dec. 8		18.18	Oct. 7		19.54	Sept. 3		18.35
			Oct. 5		22.11	Nov. 9		21.70
			Nov. 20		22.90	Dec. 23		23.30
1932			1935			1938		
Jan. 11		18.44	Jan. 18		23.81			
Feb. 10		19.32	Mar. 15		24.38	Jan. 22		24.18
Mar. 21		22.60	Apr. 29		27.75	Mar. 19		24.84
Apr. 25		29.05	June 27		24.49	Apr. 12		26.65
May 23		32.64	Aug. 15		18.78	Apr. 12		29.55
July 15		22.70	Oct. 1		22.20	May 19		27.83
Nov. 25		22.60	Nov. 18		21.08	June 8		27.05
			Dec. 30		19.96	June 30		23.70
1933			1936			1938		
Mar. 16		22.20	Feb. 21		20.90	July 13		21.98
May 4		28.64	Apr. 30		29.60	Aug. 5		19.60
June 13		28.92	June 22		27.05	Aug. 26		19.58
July 18		23.83	Aug. 20		17.23	Sept. 17		23.15
Aug. 28		18.68	Oct. 7		21.62	Oct. 17		22.43
Oct. 11		21.56	Nov. 27		20.17	Nov. 14		21.82
Nov. 27		23.56				Dec. 8		21.44

<sup>1</sup> One or more of three pumps operating.

## Well 25/44-19D1 (Washington Water Power Co. No. 5)

OWNER.—Spokane County, Edgecliff Sanitarium.

LOCATION.—In the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 19, T. 25 N., R. 44 E., about 250 feet south and 475 feet east of center of the intersection of the Appleway and Park Road. Turbine pump with 20-horsepower motor.

DESCRIPTION.—Public-supply dug well, 88 feet deep, diameter 5.0 feet at top, 2.5 feet below depth of 82 feet, open-bottom steel casing 82 to 88 feet in depth.

MEASURING POINTS.—Top face of I-beam, level with floor of former pump station; 69.7 feet below land surface and 1,899.90 feet above sea-level datum of 1929. Lower face of I-beam turbine support, level with top of brick curb, 0.6 foot above land surface and 1,970.17 feet above datum. Top inside edge of sill of recorder shelter, marked by copper nail with washer; altitude, 1,901.12 feet above datum.

BENCH MARK.—About 280 feet northeast of well along south side of the Appleway, on top face at west end of concrete headwall of culvert, a chiseled square; 1,966.27 feet above sea-level datum of 1929.

WATER LEVELS.—First measured November 20, 1920. Measurements prior to March 18, 1938, by Washington Water Power Co.; water-level recorder operated by the Geological Survey beginning January 23, 1938. Lowest and highest static levels yet recorded, December 8, 1931, and December 1933, respectively; range, 16.1 feet. Draw-down 0.12 foot. Measurements given in feet above a local datum, which is 1,806.87 feet above sea-level datum of 1929.

120 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Water levels in well 25/44-19D1 (Washington Water Power Co., No. 5)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1920</b>		<b>1935—Con.</b>		<b>1938—Con.</b>		<b>1938—Con.</b>	
Nov. 20	81.76	May 1	<sup>1</sup> 90.63	Mar. 15	85.41	June 1	90.89
<b>1923</b>		June 27	<sup>1</sup> 86.32	16	85.54	2	90.82
Mar. 22	87.36	Aug. 15	<sup>1</sup> 82.35	17	85.72	3	90.77
<b>1929</b>		Oct. 1	82.79	18	85.91	4	90.69
Apr. 13	83.48	Nov. 18	81.69	19	86.15	5	90.60
June 29	83.73	<b>1936</b>		20	86.40	6	90.51
July 27	<sup>1</sup> 81.57	Jan. 13	81.55	21	86.63	7	90.43
Aug. 23	<sup>1</sup> 81.31	Feb. 21	81.95	22	86.84	8	90.29
Oct. 5	81.76	Apr. 30	92.17	23	87.03	9	90.23
Nov. 6	81.08	June 22	<sup>1</sup> 86.05	24	87.17	10	90.12
Dec. 5	<sup>1</sup> 80.75	Aug. 21	<sup>1</sup> 81.73	25	87.28	11	90.01
<b>1930</b>		Oct. 8	<sup>1</sup> 81.57	26	87.40	12	89.83
Jan. 9	80.63	Nov. 27	80.99	27	87.49	13	89.56
Feb. 17	<sup>1</sup> 80.76	<b>1937</b>		28	87.53	14	89.25
Mar. 17	<sup>1</sup> 81.46	Apr. 12	<sup>1</sup> 85.78	29	87.59	15	88.96
May 12	<sup>1</sup> 86.04	June 7	<sup>1</sup> 90.05	30	87.62	16	88.67
June 11	<sup>1</sup> 84.33	July 7	<sup>1</sup> 84.60	31	87.66	17	88.36
July 9	<sup>1</sup> 82.03	Sept. 3	<sup>1</sup> 83.27	Apr. 1	87.68	18	88.17
Aug. 18	<sup>1</sup> 80.88	Nov. 9	82.63	2	87.70	19	88.16
Sept. 18	<sup>1</sup> 81.04	Dec. 23	85.08	3	87.69	20	88.09
Oct. 24	<sup>1</sup> 80.53	<b>1938</b>		4	87.67	21	88.02
Nov. 19	<sup>1</sup> 80.18	Jan. 22	85.68	5	87.66	22	87.92
Dec. 22	80.10	23	85.80	6	87.63	23	87.77
<b>1931</b>		24	85.84	7	87.60	24	87.65
Feb. 5	79.94	25	85.92	8	87.58	25	87.52
24	<sup>1</sup> 80.63	26	85.98	9	87.59	26	87.38
Mar. 26	<sup>1</sup> 84.26	27	86.02	10	87.63	27	87.28
Apr. 28	87.38	28	86.04	11	87.68	28	87.12
May 26	<sup>1</sup> 86.83	29	86.02	12	87.70	29	86.93
June 25	<sup>1</sup> 82.85	30	85.98	13	87.75	30	86.73
July 29	<sup>1</sup> 80.60	31	85.95	14	87.84	July 1	86.51
Aug. 26	<sup>1</sup> 80.53	Feb. 1	85.92	15	87.94	2	86.31
Oct. 9	<sup>1</sup> 80.49	2	85.84	16	88.09	3	86.18
28	<sup>1</sup> 80.43	3	85.79	17	88.21	4	86.06
Dec. 8	79.88	4	85.72	18	88.35	5	85.97
<b>1932</b>		5	85.66	19	88.55	6	85.91
Jan. 11	<sup>1</sup> 80.27	6	85.60	20	88.89	7	85.83
Feb. 10	80.56	7	85.51	21	89.37	8	85.77
Mar. 21	84.98	8	85.43	22	89.92	9	85.69
Apr. 25	92.17	9	85.32	23	90.45	10	85.65
May 23	<sup>1</sup> 94.24	10	85.18	24	90.46	11	85.59
July 15	<sup>1</sup> 84.18	11	85.01	25	91.37	12	85.51
Nov. 25	<sup>1</sup> 84.33	12	84.90	26	91.70	13	85.40
<b>1933</b>		13	84.82	27	91.98	14	85.30
Mar. 16	<sup>1</sup> 83.03	14	84.81	28	92.20	15	85.16
May 4	<sup>1</sup> 90.89	15	84.79	29	92.38	16	85.01
June 13	<sup>1</sup> 92.12	16	84.77	30	92.52	17	84.88
July 18	<sup>1</sup> 85.10	17	84.76	May 1	92.65	18	84.76
Aug. 28	<sup>1</sup> 81.93	18	84.74	2	92.74	19	84.65
Oct. 11	<sup>1</sup> 81.82	19	84.72	3	92.83	20	84.56
Nov. 27	<sup>1</sup> 83.79	20	84.69	4	92.92	21	84.46
	<sup>1</sup> 96.0	21	84.66	5	93.00	22	84.40
<b>1934</b>		22	84.62	6	93.03	23	84.35
Jan. 24	<sup>1</sup> 92.13	23	84.61	7	93.03	24	84.32
Mar. 14	<sup>1</sup> 88.78	24	84.58	8	93.00	25	84.32
Apr. 30	<sup>1</sup> 91.10	25	84.55	9	92.93	26	84.31
June 18	<sup>1</sup> 83.98	26	84.52	10	92.82	27	84.28
Aug. 7	<sup>1</sup> 82.25	27	84.50	11	92.67	28	84.26
Oct. 5	<sup>1</sup> 81.79	28	84.47	12	92.53	29	84.22
Nov. 20	<sup>1</sup> 83.05	29	84.44	13	92.35	30	84.17
<b>1935</b>		30	84.42	14	92.19	31	84.17
Jan. 18	<sup>1</sup> 84.07	Mar. 1	84.40	15	92.06	Aug. 1	84.09
Mar. 15	<sup>1</sup> 84.57	2	84.44	16	91.92	2	84.02
		3	84.46	17	91.81	3	83.97
		4	84.52	18	91.72	4	83.96
		5	84.59	19	91.63	5	83.92
		6	84.67	20	91.55	6	83.89
		7	84.76	21	91.47	7	83.85
		8	84.85	22	91.41	8	83.83
		9	84.93	23	91.32	9	83.81
		10	85.01	24	91.23	10	83.79
		11	85.08	25	91.14	11	83.76
		12	85.15	26	91.07	12	83.75
		13	85.22	27	91.01	13	83.73
		14	85.30	28	90.99	14	83.72
				29	90.96	15	83.71
				30	90.96	16	83.71
				31	90.92	17	83.68

<sup>1</sup> Pump operating in well.

<sup>2</sup> High water mark in well caused by record freshet of Spokane River in December 1933.

## Water levels in well 25/44-19D1 (Washington Water Power Co., No. 5)—Con.

Date	Water level						
1938—Con.		1938—Con.		1938—Con.		1938—Con.	
Aug. 18	83.66	Sept. 19	83.58	Oct. 21	83.33	Nov. 22	82.82
19	83.61	20	83.58	22	83.32	22	82.81
20	83.55	21	83.52	23	83.31	22	82.78
21	83.52	22	83.52	24	83.30	22	82.75
22	83.49	23	83.53	25	83.27	22	82.72
23	83.42	24	83.54	26	83.25	27	82.70
24	83.37	25	83.54	27	83.25	28	82.69
25	83.36	26	83.54	28	83.23	28	82.68
26	83.37	27	83.55	29	83.21	30	82.67
27	83.38	28	83.55	30	83.19	Dec. 1	82.65
28	83.37	29	83.56	31	83.17	2	82.65
29	83.36	30	83.56	Nov. 1	83.16	3	82.64
30	83.35	Oct. 1	83.57	2	83.15	4	82.62
31	83.35	2	83.59	3	83.14	5	82.59
Sept. 1	83.36	3	83.62	4	83.12	6	82.56
2	83.40	4	83.62	5	83.09	7	82.53
3	83.42	5	83.63	6	83.07	8	82.51
4	83.47	6	83.63	7	83.05	9	82.49
5	83.50	7	83.64	8	83.04	10	82.46
6	83.54	8	83.63	9	83.02	11	82.43
7	83.60	9	83.61	10	83.01	12	82.41
8	83.64	10	83.59	11	82.99	13	82.40
9	83.67	11	83.58	12	82.97	14	82.39
10	83.69	12	83.57	13	82.95	15	82.38
11	83.71	13	83.56	14	82.93	16	82.37
12	83.72	14	83.53	15	82.91	17	82.37
13	83.71	15	83.50	16	82.90	18	82.37
14	83.70	16	83.47	17	82.89	19	82.36
15	83.67	17	83.43	18	82.88	20	82.35
16	83.64	18	83.40	19	82.86	21	82.35
17	83.63	19	83.38	20	82.85		
18	83.60	20	83.35	21	82.84		

## Well 25/44-21J1 (Washington Water Power Co. No. 17, owner's No. 3)

OWNER.—Modern Electric Water Co., Opportunity, Wash.

LOCATION.—In the NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec, 21, T. 25 N., R. 44 E., approximately 270 feet south and 65 feet west of center of intersection of McCanna Road and Pines Avenue.

DESCRIPTION.—Irrigation dug well, 117 feet deep and 7 feet in diameter, open-bottom concrete casing. Turbine pump.

MEASURING POINTS.—Top of I-beam pump support; 93.0 feet below land surface and 1,928.60 feet above sea-level datum of 1929. Beginning in August 1938, top of concrete parapet, east side, marked by chiseled arrow; 0.2 foot above land surface and 2,021.78 feet above datum.

BENCH MARK.—About 100 feet east of well and across road, in base or west side of power pole, a copper nail with washer; 2,023.16 feet above sea-level datum of 1929.

WATER LEVELS.—First measured May 13, 1912. Lowest and highest static levels yet recorded, September 1, 1929, and June 14, 1913, respectively; range, 16.0 feet. Draw-down 7.1 to 10.2 feet.

Measurements prior to December 2, 1929, by owner, except on November 12, 1920, March 20, 1928, and March 22, 1929, when they were made by the Washington Power Co. Those from December 2, 1929, to March 18, 1938, by Washington Water Power Co.; thereafter alternately by Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,895.86 feet above sea-level datum of 1929.

122 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Water levels in well 25/44-21J1 (Washington Water Power Co. No. 17, owner's No. 3)

Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>	Date	Static level	Pumping level <sup>1</sup>
<b>1912</b>			<b>1928</b>			<b>1933</b>		
May 13	31.5	22.7	Mar. 20	27.66		Mar. 16	23.17	
June 20	30.7	22.4	May 10		18.0	May 4	28.77	
July 2	29.7	20.7	May 30		18.8	June 13	32.12	
19	26.7	19.0	June 15		17.5	July 18		24.45
31		17.9	June 30		15.4	Aug. 28		19.34
Aug. 15		17.6	July 15		14.3	Oct. 11	22.85	
31		16.7	Aug. 30		13.4	Nov. 27	24.92	
			Aug. 15		12.8			
<b>1913</b>			Sept. 30		12.0	<b>1934</b>		
June 2	34.4	24.2	Sept. 1	22.0		Jan. 24	33.51	
8	34.8	25.2	<b>1929</b>			Mar. 14	30.81	
12	35.0	25.7	Mar. 22	21.88		Apr. 30	32.91	
14	35.1	26.4	May 7		13.8	June 18		22.51
18	34.9	25.6	May 30		14.9	Aug. 7		19.85
July 10	31.6	22.4	June 15		14.4	Oct. 5	23.62	
13	31.7	22.4	July 1		13.5	Nov. 20	24.19	
17	30.7	22.4	Aug. 15		12.6	<b>1935</b>		
26		20.0	Aug. 1		11.7	Jan. 17	25.14	
Aug. 3		18.9	15		11.0	Mar. 15	25.77	
15		17.9	30		11.0	Apr. 29	29.51	
31	25.2	17.6	Sept. 1	19.1		June 26		25.15
<b>1914</b>			Dec. 2	21.10		Aug. 15		21.54
Feb. 6	22.6		<b>1930</b>			Oct. 1	24.17	
May 17	31.7	22.5	Jan. 10	20.72		Nov. 18	22.63	
27	31.5	22.5	Feb. 17	20.90		Dec. 30	21.46	
June 12	29.6	21.7	Mar. 17	21.59		<b>1936</b>		
24	27.7	19.7	May 10	21.34		Feb. 21	22.77	
July 6	26.2	18.7	June 11	20.84		Apr. 30	34.73	
20	25.4	17.9	July 2	20.00		June 23		23.57
Aug. 1		17.4	Aug. 12		17.59	Aug. 20		18.99
10		17.1	Sept. 18	21.54		Oct. 7	23.37	
24		17.0	Oct. 22	20.87		Nov. 27	21.99	
31	24.0	16.9	Nov. 19	20.30		<b>1937</b>		
<b>1920</b>			Dec. 22	20.02		Jan. 27	21.69	
Nov. 12	22.87		<b>1931</b>			Feb. 5	21.69	
<b>1926</b>			Jan. 29	19.70		Apr. 12	25.27	
May 31		16.2	Feb. 25	20.09		June 7		26.47
June 21	23.9		Mar. 26	22.28		July 6		22.73
27		15.6	Apr. 27	25.79		Sept. 3		19.51
July 1		15.5	May 20	22.44		Nov. 9	23.34	
15		15.2	June 25		20.14	Dec. 23	24.32	
Aug. 1		14.4	July 27		17.34	<b>1938</b>		
15		14.2	Aug. 26		16.20	Jan. 21	25.37	
31		14.1	Oct. 7	20.82		Mar. 19	25.86	
Sept. 1	22.2		28	20.57		Apr. 12	27.73	
<b>1927</b>			Dec. 8	19.35		27	29.95	
May 10		20.2	<b>1932</b>			May 19		27.52
June 1		19.7	Jan. 11	19.56		June 8		26.46
17	31.3		Feb. 10	20.42		30		24.58
20		19.0	Mar. 21	23.29		July 13		20.36
July 7		17.0	Apr. 25	29.46		Aug. 5		22.16
15		15.2	May 23	33.27		26	19.68	
Aug. 7		13.4	July 15		22.62	Sept. 19	24.38	
15		13.4	Nov. 25	23.47		Oct. 17	23.92	
30		12.5				Nov. 14	23.22	
Sept. 1	21.3					Dec. 8	22.86	

<sup>1</sup> One or more of three pumps operating.

## Well 25/44-22H1 (Washington Water Power Co. No. 23)

OWNER.—H. L. Cole.

LOCATION.—In the SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 22, T. 25 N., R. 44 E.

DESCRIPTION.—Dug well, 96 feet deep and 6 feet in diameter, open-bottom concrete casing.

MEASURING POINT.—Top inside edge of collar, 1.7 feet above land surface and 2,018.20 feet above approximate sea-level datum.

BENCH MARK.—None.

WATER LEVELS.—First measured November 5, 1920. Lowest and highest static levels yet recorded, January 29, and March 21, 1928, respectively; range, 7.90 feet.

Measurements by Washington Water Power Co. Measurements given in feet above a local datum, which is 1,900.00 feet above approximate sea-level datum.

## Water levels in well 25/44-22H1 (Washington Water Power Co. No. 23)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1920</i>		<i>1929—Con.</i>		<i>1930—Con.</i>		<i>1931</i>	
Nov. 5-----	28.00	July 26-----	<sup>1</sup> 26.54	Mar. 18-----	26.98	Jan. 29-----	24.70
<i>1928</i>		Aug. 22-----	<sup>1</sup> 25.69	May 12-----	<sup>1</sup> 29.82	Feb. 25-----	24.98
Mar. 21-----	32.60	Nov. 6-----	26.85	June 11-----	<sup>1</sup> 28.73	Mar. 26-----	27.50
<i>1929</i>		Dec. 2-----	26.36	July 9-----	<sup>1</sup> 26.26	Apr. 27-----	31.03
Apr. 22-----	27.44	<i>1930</i>		Aug. 18-----	<sup>1</sup> 24.44	May 26-----	<sup>1</sup> 30.35
June 23-----	29.22	Jan. 10-----	26.77	Sept. 18-----	26.67	June 25-----	<sup>1</sup> 27.30
		Feb. 17-----	26.16	Oct. 22-----	25.96		
				Nov. 19-----	25.40		
				Dec. 22-----	25.08		

<sup>1</sup> Pump operating in well.

<sup>2</sup> Discontinued as observation well.

## Well 25/44-23D1

OWNER.—Lewis A. Lewis.

LOCATION.—In the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 23, T. 25 N., R. 44 E., approximately 180 feet south and 155 feet east of center of the intersection of the Appleway and Evergreen Road, which is the northwest corner of sec. 23.

DESCRIPTION.—Irrigation dug well, 97 feet deep, diameter 4.0 feet at top, 1.5 feet at bottom, open-bottom brick casing.

MEASURING POINTS.—Top of brick and concrete parapet, southeast side; altitude 2,016.74 feet above sea-level datum of 1929. Top of paling in wood barricade, 3.76 feet vertically above top of parapet and 2,020.50 feet above datum.

BENCH MARK.—About 140 feet north of well along south side of the Appleway, in base of south side of transformer pole, a copper nail with washer; 2,016.93 feet above sea-level datum of 1929.

WATER LEVELS.—First measured April 27, 1931. Lowest and highest static levels yet recorded, December 8, 1931, and January 24, 1934; range 14.63 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,900.00 feet above sea-level datum of 1929.

## Water levels in well 25/44-23D1

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1931</i>		<i>1933—Con.</i>		<i>1935—Con.</i>		<i>1937—Con.</i>	
Apr. 27	27.71	May 4	31.90	Apr. 29	32.53	Sept. 3	25.50
May 26	27.70	June 13	34.76	June 27	30.85	Nov. 9	25.14
June 25	24.64	July 18	29.54	Aug. 15	26.09	Dec. 23	26.83
July 27	22.94	Aug. 28	25.28	Oct. 1	26.47		
Aug. 26	22.28	Oct. 10	24.98	Nov. 18	25.03	<i>1938</i>	
Oct. 7	22.64	Nov. 27	27.02			Jan. 21	27.99
Oct. 27	22.16	Dec. 28	34.16	<i>1936</i>		Mar. 22	29.02
Dec. 8	21.34			Jan. 13	24.39	Apr. 12	30.13
<i>1932</i>		<i>1934</i>		Feb. 21	25.31	May 17	33.13
Jan. 11	21.65	Jan. 24	35.97	Apr. 30	33.36	May 29	33.96
Feb. 10	22.54	Mar. 14	33.23	June 22	30.64	June 8	32.95
Mar. 21	25.49	Apr. 30	35.10	Aug. 21	25.38	June 30	29.53
Apr. 25	31.97	June 18	28.81	Oct. 7	25.71	July 13	27.75
May 23	35.71	Aug. 7	26.30	Nov. 27	24.05	Aug. 5	26.42
July 15	28.24	Oct. 5	25.81			Aug. 26	26.26
Nov. 25	26.19	Nov. 20	26.74	<i>1937</i>		Sept. 19	26.59
		<i>1935</i>		Jan. 27	23.87	Oct. 19	25.87
<i>1933</i>		Jan. 17	27.57	Apr. 12	27.76	Nov. 15	25.35
Mar. 16	25.67	Mar. 15	28.34	June 7	33.20	Dec. 8	24.98
				July 6	29.09		

<sup>1</sup> Pump operating in well.

## Well 25/45-7C1 (Washington Water Power Co. No. 67)

OWNER.—Vegalene Co., Greenacres, Wash.

LOCATION.—In the NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 7, T. 25 N., R. 45 E.

DESCRIPTION.—Industrial dug well, 68 feet deep and 5 feet in diameter, open-bottom wood curbing.

MEASURING POINT.—Top of well deck, level with land surface and 2,001.21 feet above approximate sea-level datum.

BENCH MARK.—None.

WATER LEVELS.—First measured March 27, 1928. Lowest and highest static levels yet recorded, December 10, 1931, and May 23, 1932, respectively; range, 16.85 feet.

Measurements by Washington Water Power Co. Measurements given in feet above a local datum, which is 1,900.00 feet above approximate sea-level datum.

## Water levels in well 25/45-7C1 (Washington Water Power Co. No. 67)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1928</i>		<i>1930—Con.</i>		<i>1931—Con.</i>		<i>1932—Con.</i>	
Mar. 27	49.76	Mar. 18	42.26	Apr. 29	45.36	May 23	55.41
		May 12	46.49	May 28	46.21	July 16	49.48
<i>1929</i>		June 12	45.73	June 29	44.01	Nov. 26	45.51
		July 10	43.93	July 28	42.02		
Mar. 21	43.39	Aug. 19	42.76	Aug. 27	41.54	<i>1933</i>	
June 29	47.75	Sept. 19	42.43	Oct. 7	40.51	Mar. 17	44.60
Aug. 23	45.11	Oct. 22	41.14	28	39.68	May 4	51.24
Oct. 8	43.80	Nov. 20	40.21	Dec. 10	38.56	June 13	55.40
Nov. 7	42.83	Dec. 23	39.57			July 15	51.96
Dec. 2	42.09			<i>1932</i>		Aug. 28	46.96
<i>1930</i>		<i>1931</i>		Jan. 15	39.49	Oct. 11	45.16
		Jan. 30	39.04	Feb. 11	39.54	Nov. 27	46.69
Jan. 14	41.27	Feb. 25	39.75	Mar. 23	43.18	<i>1934</i>	
Feb. 21	41.53	Mar. 30	42.71	Apr. 26	49.89	Jan. 24	( <sup>1</sup> )

<sup>1</sup> Discontinued as observation well.

## Well 25/45-10C1 (Washington Water Power Co. No. 41)

OWNER.—W. C. Lielman.

LOCATION.—In the NE¼NW¼ sec. 10, T. 25 N., R. 45 E., about 25 feet northwest of dwelling and 260 feet south of the Spokane River.

DESCRIPTION.—Domestic dug well, 67 feet deep and 3 feet in diameter, open-bottom tile casing. Hand-operated lift pump.

MEASURING POINT.—Top of 4- by 4-inch stringer of well deck, level with top of 36-inch tile casing, marked by copper nail with washer, 0.5 foot above land surface and 2,020.04 feet above sea-level datum of 1929.

BENCH MARKS.—About 120 feet southeast of well, in base on east side of power pole, a copper nail with washer; 2,023.41 feet above datum. About 12 feet north of well, in root crown on south side of 6-inch locust tree, a copper nail with washer; 2,019.85 feet above datum.

WATER LEVELS.—First measured March 5, 1928. Well dry repeatedly during autumn and early winter; highest static level yet recorded, April 30, 1934; range, at least 19.3 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,895.23 feet above sea-level datum of 1929.

## Water levels in well 25/45-10C1 (Washington Water Power Co. No. 41)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1928</i>		<i>1931—Con.</i>		<i>1934—Con.</i>		<i>1937—Con.</i>	
Mar. 5	62.81	Apr. 27	58.56	Mar. 14	71.76	Apr. 12	65.38
<i>1929</i>		May 26	59.28	Apr. 30	74.86	June 8	69.49
Apr. 5	61.66	June 29	57.02	June 20	69.77	July 6	65.86
June 28	62.79	July 27	(1)	Aug. 7	66.74	Sept. 3	62.04
July 26	60.86	Aug. 26	(1)	Oct. 5	63.60	Nov. 9	58.60
Aug. 22	60.21	Oct. 6	(1)	Nov. 20	63.31	Dec. 23	60.59
Oct. 3	59.03	<i>1932</i>		<i>1935</i>		<i>1937</i>	
Nov. 6	58.35	Jan. 11	56.55	Mar. 14	64.66	Jan. 21	61.31
Dec. 2	(1)	Feb. 11	55.67	Apr. 29	69.91	Mar. 22	62.61
<i>1930</i>		Mar. 21	58.81	June 27	70.26	Apr. 12	63.36
Mar. 17	57.53	Apr. 26	63.97	Aug. 15	65.21	Apr. 26	68.54
May 12	60.33	July 15	64.26	Oct. 1	63.86	May 19	68.16
June 11	59.48	Nov. 25	59.16	Nov. 18	60.66	June 8	68.72
July 9	57.55	<i>1933</i>		Dec. 30	59.03	July 29	66.97
Aug. 18	56.28	Mar. 17	58.16	<i>1936</i>		July 13	65.43
Sept. 20	55.58	May 5	66.43	Feb. 25	60.76	Aug. 4	64.07
Oct. 22	(1)	June 13	70.51	Apr. 30	71.78	Sept. 19	62.51
Nov. 19	(1)	July 17	66.58	June 22	69.01	Oct. 17	60.94
Dec. 22	(1)	Aug. 27	61.79	Aug. 21	64.06	Nov. 14	59.68
<i>1931</i>		Oct. 10	59.52	Oct. 6	61.75	Dec. 8	58.91
Jan. 29	(1)	Nov. 23	60.42	Nov. 27	59.08		
Feb. 27	56.19	<i>1934</i>		<i>1937</i>			
Mar. 27	60.11	Jan. 24	73.76	Feb. 5	57.47		

<sup>1</sup> Well dry.

<sup>2</sup> Level of ice in well.

## Well 25/45-16C1 (Washington Water Power Co. No. 38)

OWNER.—Inland Empire Paper Co., Millwood, Wash.

LOCATION.—In the NE¼NW¼ sec. 16, T. 25 N., R. 45 E., 0.7 mile west of Harvard Road, 600 feet south of county road west, and 650 feet southeast of small frame dwelling

DESCRIPTION.—Unused dug well, 129 feet deep and 8 feet in diameter, open-bottom concrete casing.

MEASURING POINTS.—Top of 4- by 12-inch I-beam spanning well, level with land surface and 2,055.89 feet above sea-level datum of 1929. Top inside edge of sill of shelter for water-level recorder, 1.5 feet above land surface and 2,057.43 feet above datum.

BENCH MARK.—About 80 feet east of well at southeast concrete footing for former tank tower, top of ¾-inch bolt surrounded by a chiseled square; 2,057.03 feet above sea-level datum of 1929.

WATER LEVELS.—First measured November 16, 1920. Measurements prior to March 18, 1938, by Washington Water Power Co. Water-level recorder operated by the Geological Survey beginning January 27, 1938. Lowest and highest levels yet recorded, December 8, 1931, and April 30, 1934, respectively; range, 20.06 feet. Measurements given in feet above a local datum, which is 1,895.47 feet above sea-level datum of 1929.

## Water levels in well 25/45-16C1 (Washington Water Power Co. No. 38)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1920</i>		<i>1932—Con.</i>		<i>1936—Con.</i>		<i>1938—Con.</i>	
Nov. 16.....	52.82	Feb. 10.....	46.70	June 22.....	62.30	Feb. 21.....	54.22
		Mar. 21.....	49.86	Aug. 21.....	56.74	22.....	54.21
<i>1929</i>		Apr. 25.....	56.71	Oct. 7.....	54.99	23.....	54.20
		May 23.....	63.06	Nov. 27.....	52.44	24.....	54.18
Apr. 5.....	53.45	July 15.....	58.42			25.....	54.18
June 28.....	55.88	Nov. 25.....	53.02	<i>1937</i>		26.....	54.17
July 29.....	53.86			Feb. 5.....	51.44	27.....	54.15
Aug. 22.....	53.20	<i>1933</i>		Apr. 12.....	55.42	28.....	54.14
Oct. 3.....	52.30	Mar. 17.....	52.33	June 7.....	62.74	Mar. 1.....	54.13
Nov. 6.....	50.82	May 4.....	58.69	July 6.....	59.46	2.....	54.12
Dec. 2.....	50.00	June 14.....	63.59	Sept. 3.....	55.54	3.....	54.11
		July 17.....	60.46	Nov. 9.....	52.62	4.....	54.11
<i>1930</i>		Aug. 28.....	55.59	Dec. 23.....	53.57	5.....	54.12
Jan. 10.....	49.02	Oct. 10.....	53.58			6.....	54.16
Feb. 17.....	48.81	Nov. 27.....	54.75	<i>1938</i>		7.....	54.20
Mar. 17.....	50.09	Dec. 28.....	61.97	Jan. 21.....	54.27	8.....	54.25
May 12.....	54.30			27.....	54.42	9.....	54.31
June 11.....	53.59	<i>1934</i>		28.....	54.44	10.....	54.36
July 9.....	51.94	Jan. 23.....	65.29	29.....	54.50	11.....	54.41
Aug. 18.....	50.78	Mar. 14.....	63.15	30.....	54.52	12.....	54.45
Sept. 18.....	50.42	Apr. 30.....	65.95	31.....	54.55	13.....	54.50
Oct. 22.....	48.90	Apr. 29.....	61.78	Feb. 1.....	54.56	14.....	54.57
Nov. 19.....	47.88	June 20.....	61.78	2.....	54.56	15.....	54.64
Dec. 22.....	47.10	Aug. 7.....	58.80	3.....	54.56	16.....	54.73
		Oct. 5.....	56.54	4.....	54.56	17.....	54.84
<i>1931</i>		Nov. 20.....	56.10	5.....	54.56	18.....	54.99
		<i>1935</i>		6.....	54.57	19.....	55.11
Jan. 29.....	46.52	Jan. 17.....	56.42	7.....	54.57	20.....	55.29
Feb. 25.....	47.04	Mar. 15.....	56.85	8.....	54.57	21.....	55.42
Mar. 26.....	49.49	Apr. 29.....	60.91	9.....	54.54	22.....	55.57
Apr. 27.....	52.52	June 27.....	63.09	10.....	54.47	23.....	55.69
May 26.....	54.12	Aug. 15.....	58.20	11.....	54.39	24.....	55.90
June 29.....	51.84	Oct. 1.....	56.70	12.....	54.39	25.....	56.01
July 27.....	50.17	Nov. 18.....	54.12	13.....	54.31	26.....	56.01
Aug. 26.....	49.10			14.....	54.29	27.....	56.13
Oct. 6.....	48.02	<i>1936</i>		15.....	54.28	28.....	56.23
28.....	47.29	Jan. 13.....	52.94	16.....	54.28	29.....	56.30
Dec. 8.....	45.89	Feb. 25.....	53.85	17.....	54.28	30.....	56.37
		Apr. 30.....	61.81	18.....	54.27	31.....	56.43
<i>1932</i>				19.....	54.25	Apr. 1.....	56.49
Jan. 11.....	46.38			20.....	54.24	2.....	56.55
						3.....	56.60
						4.....	56.64

Water levels in well 25/45-18C1 (Washington Water Power Co. No. 38)--Continued

Date	Water level						
1938--Con.		1938--Con.		1938--Con.		1938--Con.	
Apr. 5	56.66	June 12	62.15	Aug. 19	56.67	Oct. 26	54.16
6	56.68	13	62.06	20	56.64	27	54.12
7	56.70	14	61.92	21	56.62	28	54.09
8	56.72	15	61.77	22	56.59	29	54.04
9	56.76	16	61.58	23	56.56	30	54.00
10	56.78	17	61.43	24	56.53	31	53.97
11	56.83	18	61.30	25	56.52	Nov. 1	53.92
12	56.85	19	61.25	26	56.51	2	53.88
13	56.89	20	61.21	27	56.51	3	53.84
14	56.94	21	61.18	28	56.50	4	53.82
15	57.01	22	61.10	29	56.47	5	53.79
16	57.05	23	61.01	30	56.47	6	53.75
17	57.12	24	60.92	Sept. 1	56.48	7	53.72
18	57.22	25	60.83	2	56.47	8	53.68
19	57.36	26	60.76	3	56.48	9	53.64
20	57.62	27	60.67	4	56.48	10	53.61
21	57.97	28	60.57	5	56.48	11	53.57
22	58.35	29	60.47	6	56.48	12	53.55
23	58.71	30	60.33	7	56.48	13	53.51
24	59.04	July 1	60.18	8	56.48	14	53.47
25	59.32	2	60.02	9	56.46	15	53.43
26	59.56	3	59.88	10	56.46	16	53.40
27	59.75	4	59.76	11	56.43	17	53.37
28	59.96	5	59.66	12	56.42	18	53.34
29	60.15	6	59.56	13	56.41	19	53.32
30	60.34	7	59.47	14	56.39	20	53.28
May 1	60.53	8	59.37	15	56.38	21	53.26
2	60.71	9	59.28	16	56.38	22	53.23
3	60.88	10	59.18	17	56.36	23	53.21
4	61.03	11	59.09	18	56.36	24	53.17
5	61.17	12	59.00	19	56.21	25	53.13
6	61.30	13	58.90	20	56.14	26	53.11
7	61.41	14	58.81	21	56.05	27	53.08
8	61.50	15	58.70	22	55.98	28	53.05
9	61.56	16	58.60	23	55.89	29	53.03
10	61.62	17	58.49	24	55.87	30	52.99
11	61.68	18	58.39	25	55.73	Dec. 1	52.98
12	61.73	19	58.29	26	55.66	2	52.94
13	61.75	20	58.20	27	55.59	3	52.93
14	61.77	21	58.12	28	55.52	4	52.89
15	61.80	22	58.05	29	55.48	5	52.85
16	61.82	23	57.97	30	55.41	6	52.81
17	61.87	24	57.91	Oct. 1	55.38	7	52.76
18	61.87	25	57.84	2	55.34	8	52.72
19	61.88	26	57.77	3	55.25	9	52.71
20	61.89	27	57.70	4	55.21	10	52.68
21	61.91	28	57.65	5	55.15	11	52.64
22	61.93	29	57.57	6	55.10	12	52.62
23	61.94	30	57.51	7	55.04	13	52.58
24	61.96	Aug. 1	57.43	8	55.04	14	52.55
25	62.00	2	57.38	9	54.98	15	52.52
26	62.02	3	57.33	10	54.93	16	52.50
27	62.05	4	57.26	11	54.87	17	52.49
28	62.08	5	57.19	12	54.83	18	52.47
29	62.12	6	57.15	13	54.77	19	52.46
30	62.19	7	57.10	14	54.72	20	52.43
31	62.21	8	57.07	15	54.67	21	52.42
June 1	62.25	9	57.02	16	54.62	22	52.40
2	62.28	10	56.98	17	54.56	23	52.37
3	62.30	11	56.95	18	54.51	24	52.33
4	62.31	12	56.91	19	54.46	25	52.32
5	62.31	13	56.86	20	54.41	26	52.31
6	62.31	14	56.84	21	54.37	27	52.27
7	62.31	15	56.80	22	54.32	28	52.23
8	62.31	16	56.78	23	54.28	29	52.24
9	62.29	17	56.76	24	54.24	30	52.16
10	62.26	18	56.73	25	54.20	31	52.13
11	62.22						

Well 25/45-18A1 (Washington Water Power Co. No. 40)

OWNER.—O. B. Nilson, Greenacres, Wash.

LOCATION.—In the NE¼NE¼ sec. 18, T. 25 N., R. 45 E., 150 feet north of Coeur d'Alene and Spokane Ry., and 85 feet east of county road north.

DESCRIPTION.—Public-supply and irrigation dug well, 98 feet deep and 6 feet in diameter, open-bottom brick casing. Triplex plunger pump with 5-horse-power motor.

**MEASURING POINTS.**—Top of concrete pump floor, 79.4 feet below land surface and 1,957.31 feet above sea-level datum of 1929. Top of 4- by 10-inch I-beam pump support, north side of well, 3.6 feet above land surface and 2,040.38 feet above datum.

**BENCH MARK.**—About 4 feet west from southwest corner of pump house and 40 feet west of wooden tank tower, in top southwest corner of concrete walk, a copper nail with washer; 2,036.80 feet above sea-level datum of 1929.

**WATER LEVELS.**—First measured March 5, 1928. Lowest and highest levels yet recorded (both static), December 8, 1931, and April 30, 1934, respectively; range, 18.72 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,897.13 feet above sea-level datum of 1929.

*Water levels in well 25/45-18A1 (Washington Water Power Co. No. 40)*

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1931—Con.</b>		<b>1934</b>		<b>1937</b>	
Mar. 5	51.54	Mar. 27	44.83	Jan. 24	59.29	Feb. 5	45.90
<b>1929</b>		Apr. 27	46.91	Mar. 14	57.00	Apr. 23	51.88
Apr. 5	1 48.09	May 26	49.08	Apr. 30	59.76	June 7	56.89
June 28	1 50.77	June 29	46.77	June 20	55.06	July 6	51.93
July 29	1 48.20	July 27	45.18	Aug. 7	52.16	Sept. 3	49.56
Aug. 22	1 47.58	Aug. 26	44.06	Oct. 5	50.26	Nov. 9	46.98
Nov. 6	44.34	Oct. 7	43.03	Nov. 20	50.33	<b>1938</b>	
Dec. 2	44.59	Oct. 28	42.26	<b>1935</b>		Jan. 21	2 48.98
<b>1930</b>		Dec. 8	41.04	Jan. 17	50.67	Mar. 22	1 50.75
Jan. 10	43.69	<b>1932</b>		Mar. 15	51.35	Apr. 12	2 51.46
Feb. 17	44.02	Jan. 11	41.50	Apr. 29	55.41	27	1 54.61
Mar. 17	45.00	Feb. 10	41.91	June 27	56.73	May 19	56.38
May 12	49.12	Mar. 21	45.18	Aug. 15	1 52.21	June 8	56.65
June 11	48.46	Apr. 25	52.08	Oct. 1	50.66	30	54.11
July 9	46.73	May 23	57.85	Nov. 18	1 48.48	July 15	1 52.77
Aug. 18	45.48	July 15	52.46	Dec. 30	1 46.72	Aug. 5	51.16
Sept. 20	45.16	Nov. 25	47.68	<b>1936</b>		26	1 50.58
Oct. 23	43.73	<b>1933</b>		Feb. 21	47.96	Sept. 19	50.24
Nov. 24	42.66	Mar. 17	46.96	Apr. 30	1 56.18	Oct. 17	1 48.77
Dec. 22	42.18	May 4	53.50	June 22	1 55.86	Nov. 14	1 49.39
<b>1931</b>		June 13	57.83	Aug. 21	50.73	Dec. 8	47.13
Feb. 5	41.38	July 18	54.16	Oct. 7	48.85		
27	42.25	Aug. 28	49.67	Nov. 27	46.90		
		Oct. 10	47.77				
		Nov. 27	49.15				

<sup>1</sup> Pump operating in well.

<sup>2</sup> Pump stopped immediately before measuring water level.

**Well 26/43-19A1**

**OWNER.**—Country Homes Estates, Spokane, Wash.

**LOCATION.**—In the NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 26 N., R. 43 E., about 195 feet south and 120 feet east of center of cross road.

**DESCRIPTION.**—Public-supply and irrigation dug well, 161 feet deep and 6.2 feet in diameter, open-bottom brick casing. Pumps: Deep-well turbine, capacity 1,000 gallons a minute, 100-horsepower motor; triplex plunger pump, capacity about 175 gallons a minute, 20-horsepower motor.

**MEASURING POINTS.**—Top inside edge of concrete parapet, north side of well, level with concrete floor of pump house, marked by chiseled arrow; altitude 1,937.41 feet above sea-level datum of 1929. Top of 4- by 12-inch I-beam turbine support, northeast side of pump, 135.65 feet below top inside edge of parapet; 1,801.76 feet above datum.

**BENCH MARK.**—About 80 feet northwest of well, at northeast corner of transformer yard, in top on northeast side of concrete footing of post, a chiseled square; 1,933.91 feet above sea-level datum of 1929.

**WATER LEVELS.**—First measured November 25, 1930. Lowest and highest levels yet recorded, July 29, 1931 (pumping), and March 15, 1934 (static), respectively; range, 5.25 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,750.00 feet above sea-level datum of 1929.

*Water levels in well 26/43-19A1*

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1930</i>		<i>1932—Con.</i>		<i>1935</i>		<i>1937—Con.</i>	
Nov. 25.....	1 47.54	May 24.....	1 49.63	Jan. 18.....	1 48.59	Dec. 23.....	1 48.25
Dec. 24.....	1 47.41	July 16.....	1 51.06	Mar. 15.....	1 48.84		
<i>1931</i>		Nov. 28.....	1 48.76	Apr. 29.....	1 49.14	<i>1937</i>	
Jan. 29.....	47.41	<i>1933</i>		June 27.....	1 48.87	Jan. 22.....	1 48.85
Feb. 25.....	1 47.09	Mar. 18.....	49.50	Aug. 16.....	1 48.31	Mar. 19.....	49.38
Mar. 24.....	47.51	May 4.....	1 49.23	Oct. 2.....	1 47.46	Apr. 12.....	1 49.33
Apr. 30.....	48.01	June 14.....	1 49.01	Nov. 18.....	1 48.69	Apr. 27.....	1 49.49
May 28.....	48.70	July 18.....	1 49.66	Dec. 30.....	48.11	May 19.....	1 49.81
June 30.....	49.26	Aug. 29.....	1 48.87	<i>1936</i>		June 8.....	1 46.79
July 29.....	1 46.94	Oct. 11.....	1 49.63	Feb. 21.....	48.06	July 16.....	1 48.90
Aug. 28.....	48.13	Nov. 27.....	1 48.81	May 1.....	1 48.34	Aug. 5.....	1 48.63
Oct. 13.....	1 47.72	<i>1934</i>		June 22.....	1 50.21	Aug. 26.....	1 49.89
Dec. 30.....	1 47.71	Jan. 24.....	1 50.36	Oct. 8.....	48.88	Sept. 19.....	49.71
Dec. 10.....	1 47.34	Mar. 15.....	52.19	Nov. 28.....	1 48.38	Oct. 17.....	1 49.03
<i>1932</i>		May 2.....	1 51.78	<i>1937</i>		Nov. 15.....	1 48.80
Jan. 13.....	1 47.21	June 18.....	1 49.34	Feb. 5.....	1 48.04	Dec. 8.....	1 48.81
Feb. 12.....	1 47.16	Aug. 8.....	1 49.81	Apr. 13.....	48.21		
Mar. 23.....	1 47.49	Oct. 5.....	1 49.09	July 6.....	1 48.21		
Apr. 25.....	1 48.36	Nov. 20.....	1 48.51	Nov. 9.....	1 48.65		

<sup>1</sup> Pump operating in well.

<sup>2</sup> Pump stopped immediately before water level was measured.

**Well 26/43-34P1 (Washington Water Power Co. No. 80)**

**OWNER.**—Great Northern Ry. Co., Hillyard shop, at Hillyard, Wash.

**LOCATION.**—In the SE  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec. 34, T. 26 N., R. 43 E., in railroad yard about 100 feet south of Wabash Avenue projected and 300 feet east of main-line track, in brick pump house, 75 feet north of tank tower.

**DESCRIPTION.**—Railroad dug well.

**MEASURING POINTS.**—Zero of chain gage; 1,857.23 feet, 1,853.23 feet, and other distances above sea-level datum of 1929. Inner lip of concrete curb, north side, above ladder, 0.2 foot below top of curb, a chiseled arrow; 2,036.58 feet above datum. Top of 48-inch steel casing, south side, a chiseled arrow; 164.05 feet below inner lip of concrete curb, 9.4 feet above pit floor, and 1,872.53 feet above datum.

**BENCH MARK.**—South side of pump house at center of door, on top of concrete foundation, a chiseled square; 0.5 foot above land surface, 2,053.04 feet above city datum, and 2,036.48 feet above sea-level datum of 1929.

**WATER LEVELS.**—Measurements by owner from chain gage, beginning March 2, 1928. Lowest and highest levels yet recorded, November 20, 1937, and May 15, 1928, respectively; range, 17.6 feet. Draw-down by pump reported to be about 1 foot.

Measurements given in feet above a local datum, which is 1,801.86 feet above sea-level datum of 1929.

130 CONTRIBUTIONS TO HYDROLOGY OF UNITED STATES, 1941-43

Water levels in well 26/4S-34P1 (Washington Water Power Co. No. 80)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1928</i>		<i>1929—Con.</i>		<i>1930—Con.</i>		<i>1931—Con.</i>	
Mar. 2	65.2	Dec. 28	1 58.79	Nov. 15	1 58.79	Sept. 12	1 59.46
Apr. 6	64.0	31	1 58.96	19	1 58.46	23	1 59.04
20	67.6	<i>1930</i>		Dec. 3	1 58.29	26	1 59.04
May 15	71.0	Jan. 4	1 58.58	6	1 58.54	30	1 58.96
July 25	63.2	8	1 59.58	10	1 58.37	Oct. 5	1 59.04
Nov. 21	1 59.75	11	1 59.37	13	1 59.37	7	1 59.04
24	1 59.62	15	1 58.20	20	1 59.54	10	1 59.04
28	1 59.66	22	1 59.29	23	1 58.37	14	1 59.04
Dec. 1	1 59.58	25	1 58.12	<i>1931</i>		17	1 59.04
2	1 59.54	29	1 57.96	Jan. 3	59.54	21	1 59.04
5	1 59.54	1	1 58.20	8	1 58.29	24	1 58.79
8	1 59.54	5	1 58.20	12	59.54	28	1 58.79
9	1 59.34	8	1 58.54	15	59.54	Nov. 3	1 59.04
12	1 59.46	11	1 58.54	20	1 58.54	7	1 58.96
15	1 59.54	20	1 58.79	24	1 58.54	11	1 58.96
16	1 59.42	21	1 58.79	28	1 58.54	14	1 58.96
19	1 59.50	26	1 58.54	31	1 59.70	18	1 58.96
22	1 59.54	Mar. 1	1 59.20	Feb. 3	1 58.54	22	1 58.96
26	1 59.46	5	1 59.20	7	1 58.71	25	1 58.96
29	1 59.42	12	1 59.71	9	1 58.79	28	1 58.87
<i>1929</i>		15	1 59.79	11	1 58.79	Dec. 2	1 58.71
Jan. 23	1 59.29	19	1 59.62	16	1 58.71	5	1 58.54
24	1 59.29	22	60.54	24	1 58.87	9	1 58.54
30	1 59.29	26	1 59.71	28	1 58.96	12	1 58.54
Mar. 1	1 59.04	29	1 59.87	Mar. 4	1 59.12	16	1 58.54
6	1 59.04	Apr. 2	1 60.29	7	1 59.29	19	1 58.46
9	1 59.11	5	1 60.54	12	1 59.12	23	1 58.46
13	1 59.21	9	1 60.96	17	1 59.29	26	1 58.46
15	1 59.29	12	62.12	20	1 60.04	30	1 58.46
20	1 59.29	16	1 61.71	24	1 60.04	<i>1932</i>	
23	1 59.29	19	1 62.20	28	1 60.54	Jan. 2	1 58.46
28	1 59.29	23	1 62.29	31	1 60.79	6	1 58.46
30	1 59.29	26	1 62.71	Apr. 4	62.04	9	1 58.46
Apr. 3	1 59.37	30	1 62.87	6	1 61.62	13	1 58.54
6	1 59.54	May 3	64.04	8	1 61.79	16	1 58.71
10	1 60.29	7	1 63.04	11	62.12	20	1 59.04
16	1 60.54	10	1 63.04	15	1 62.62	23	1 59.12
17	1 60.96	14	1 63.20	18	1 62.79	27	1 59.12
20	1 60.96	17	1 63.04	20	1 62.96	30	1 59.12
25	1 60.96	24	63.54	21	1 63.04	Feb. 1	60.04
27	1 60.96	11	1 62.54	25	1 63.54	6	1 59.12
30	1 61.21	18	1 62.54	29	1 64.04	9	60.21
May 2	1 61.54	21	1 62.20	May 2	64.04	13	60.12
5	1 61.41	25	1 61.87	6	1 64.04	22	60.37
8	1 62.45	28	1 61.71	9	1 64.20	24	60.46
11	1 62.71	July 5	1 61.62	13	1 64.46	27	60.37
15	1 62.79	12	1 60.79	16	1 65.04	Mar. 3	60.46
18	1 63.04	16	1 60.54	21	1 65.04	6	60.96
22	1 63.29	19	1 60.54	24	1 64.54	9	1 60.62
25	1 63.54	21	1 60.54	27	1 64.29	12	1 60.87
29	1 63.71	26	1 60.29	29	1 64.20	16	62.21
June 1	1 63.88	30	1 59.96	June 3	1 63.54	19	62.29
5	1 63.88	Aug. 2	1 59.96	6	1 63.37	22	62.54
8	1 63.62	6	1 59.88	10	1 63.04	28	63.04
14	1 63.37	8	1 59.96	13	1 62.79	Apr. 2	63.79
19	1 63.20	12	1 60.04	17	1 62.29	7	1 63.79
22	1 63.12	27	1 59.54	20	1 62.12	11	1 63.62
27	1 62.71	Sept. 2	1 59.54	24	1 61.96	16	65.04
29	1 62.54	6	1 59.46	27	1 61.79	22	67.04
July 3	1 62.29	10	1 59.46	July 1	62.29	May 7	67.37
6	1 62.12	13	1 59.54	3	1 61.46	14	69.12
10	1 62.12	17	1 60.54	8	1 61.04	21	69.87
13	1 62.04	20	1 59.54	11	1 61.04	28	70.12
27	1 60.96	24	1 59.54	15	1 60.87	June 4	70.12
Aug. 1	61.54	27	1 59.54	18	1 60.62	11	69.71
Sept. 1	1 60.54	Oct. 1	1 59.54	22	1 60.46	18	69.12
Oct. 15	1 60.04	4	60.54	25	1 60.21	26	68.46
Nov. 20	1 59.04	8	60.54	29	1 60.12	July 2	67.29
23	1 59.04	11	1 59.12	Aug. 1	1 60.04	9	66.21
27	1 58.96	15	1 59.37	10	1 59.71	16	65.46
30	1 58.96	18	1 59.20	12	1 59.62	23	64.54
Dec. 4	1 59.37	22	1 59.04	15	1 59.62	30	64.04
7	1 58.96	25	1 59.04	19	1 59.62	Aug. 6	63.54
11	60.04	29	1 58.96	22	1 59.46	19	62.71
14	60.04	Nov. 1	1 58.96	27	1 59.46	27	62.54
18	1 58.79	5	1 58.96	29	1 59.46	Sept. 3	62.46
21	59.87	8	1 58.96	Sept. 2	1 59.26	9	62.04
24	1 58.77	12	1 58.87	8	1 59.54	17	61.87

1 Pump operating in well.

## Water levels in well 26/43-34P1 (Washington Water Power Co. No. 80)—Continued

Date	Water level						
1932—Con.		1934—Con.		1935—Con.		1937—Con.	
Sept. 24	61.71	Apr. 18	66.20	Nov. 21	58.54	May 29	161.45
Oct. 1	61.37	25	65.20	27	58.54	June 5	162.04
10	61.37	May 2	66.37	6	58.54	12	161.62
17	61.37	9	65.87	14	58.54	19	160.87
22	61.37	16	65.45	20	58.20	24	160.37
29	61.21	22	64.95	28	58.20	30	159.87
Nov. 5	61.04	29	64.04			July 7	159.29
14	60.96	June 6	63.37	1936		16	163.53
19	60.96	11	62.95	Jan. 3	58.20	24	168.12
26	61.96	20	62.04	10	57.54	31	157.45
Dec. 4	62.54	27	61.45	17	57.45	Aug. 3	157.20
10	62.71	July 3	61.20	24	58.12	7	157.20
17	62.87	10	60.54	31	58.29	14	156.87
23	62.87	19	60.62	Feb. 10	58.37	21	156.87
31	62.79	30	60.37	17	58.20	28	156.87
		Aug. 7	60.12	29	58.04	Sept. 7	156.87
		14	59.87	Mar. 7	58.37	14	156.37
		25	59.37	16	58.95	24	156.37
		31	59.62	24	59.87	Oct. 2	156.37
Jan. 7	62.62	Sept. 9	59.20	Apr. 4	60.12	9	156.12
12	62.71	14	59.29	11	60.12	17	155.87
21	63.54	Oct. 1	59.12	23	61.37	23	155.87
28	62.88	8	59.04	May 1	61.87	29	155.87
Feb. 3	62.79	15	58.95	9	62.37	Nov. 6	155.37
11	62.54	26	58.87	18	63.37	13	154.87
27	62.46	Nov. 5	58.87	23	63.45	20	154.37
Mar. 9	62.21	10	59.04	29	63.37	27	155.70
17	62.29	20	59.70	June 8	62.87	Dec. 4	156.37
24	62.54	Dec. 1	59.87	13	61.87	11	156.37
Apr. 3	62.96	10	60.04	20	61.37	18	156.87
8	63.54	15	59.95	29	60.70	24	157.37
14	64.54	31	60.12	July 6	60.29	31	157.37
22	64.87			13	59.87		
26	65.04	1935		20	59.54	1938	
May 1	65.54	Jan. 7	60.37	27	59.12	Jan. 8	157.95
10	67.21	14	60.45	31	58.87	15	157.87
15	67.71	22	60.79	Aug. 7	58.37	22	60.37
22	68.21	29	60.79	14	58.04	Feb. 5	60.37
30	69.04	Feb. 5	60.95	22	57.87	12	59.45
June 3	68.29	11	61.20	29	57.12	20	59.45
10	68.54	18	61.29	Sept. 5	57.62	26	59.12
17	69.04	27	61.29	12	57.54	Mar. 7	59.37
24	69.37	Mar. 6	61.37	19	57.04	14	59.29
30	69.04	13	61.29	27	56.62	21	59.62
July 8	68.04	20	61.45	Oct. 9	56.37	28	61.37
15	67.12	30	61.95	17	56.95	Apr. 4	61.37
24	65.46	Apr. 6	62.20	24	56.87	9	61.37
29	64.96	13	62.37	31	56.87	19	61.37
Aug. 5	65.21	20	62.45	Nov. 7	56.87	28	62.37
11	63.29	27	63.37	14	56.37	May 6	63.95
18	63.29	May 3	64.37	21	56.04	9	64.12
26	63.87	11	65.29	Dec. 7	55.87	14	64.37
Sept. 2	63.12	18	65.87	12	55.62	21	64.12
16	63.12	29	66.37	17	55.87	28	64.04
23	62.87	June 6	66.20	26	55.70	June 4	63.87
30	62.37	15	65.87	1937		11	63.54
Oct. 7	62.54	22	65.37	Jan. 5	55.12	18	63.29
14	62.37	29	64.12	11	54.62	25	62.87
24	62.37	July 6	63.37	16	54.45	July 1	61.45
Nov. 3	63.29	13	62.62	23	54.37	9	60.70
12	64.54	22	61.87	30	54.29	16	60.20
28	64.12	27	61.37	Feb. 9	54.45	23	59.87
Dec. 9	63.87	Aug. 5	60.54	13	54.37	Aug. 1	59.87
16	64.87	10	60.45	20	54.37	6	59.62
22	65.87	17	60.37	27	54.37	13	59.37
		24	60.29	Mar. 5	54.62	20	58.12
1934		Sept. 5	60.29	13	55.37	Sept. 3	57.87
Jan. 6	65.95	12	59.87	20	55.54	19	58.04
13	66.12	20	59.62	27	56.04	26	57.54
20	67.04	Oct. 5	59.45	Apr. 7	56.45	Oct. 1	57.54
Feb. 3	67.87	12	59.37	12	57.87	5	57.37
10	67.54	17	59.29	20	58.70	24	57.20
16	66.37	24	59.20	26	59.45	Nov. 4	57.37
24	65.79	31	59.12	May 10	60.37	14	57.20
Mar. 2	65.20	Nov. 7	59.04	17	61.37	19	57.20
12	64.70	16	58.95	24	61.70	29	56.87
19	64.54					Dec. 3	56.87
24	64.54						
Apr. 3	64.87						
9	65.54						

1 Pump operating in well.

## Well 26/44-32R1 (Washington Water Power Co. No. 46)

OWNER.—Hutton Settlement, Millwood, Wash.

LOCATION.—In the SE¼SE¼ sec. 32, T. 26 N., R. 44 E., in brick pump house about 235 feet S. 25° E. of entrance of administration building, about 15 feet north of boundary of sec. 32 and 180 feet east of a lane. Three-stage centrifugal pump with 15-horsepower motor.

DESCRIPTION.—Public supply and irrigation dug well, 113 feet deep, diameter 6 feet at top and 3.8 feet at bottom, open-bottom brick casing.

MEASURING POINTS.—Top of steel grating over well, marked by chiseled arrow; 3.05 feet above pump house floor, 3.7 feet below land surface, and 1,998.38 feet above sea-level datum of 1929. Bottom of steel support at north side of pump, level with top of inner brick casing and 86.42 feet below top of grating; 1,911.96 feet above datum.

BENCH MARK.—At entrance to brick well house, at south end of top granite step, a chiseled square; 0.4 foot above land surface and 2,002.48 feet above sea-level datum of 1929.

WATER LEVELS.—First measured March 15, 1928. Lowest and highest levels yet recorded, December 10, 1931 (pumping), and January 24, 1934 (static) respectively; range, 15.23 feet. Draw-down about 2 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,849.84 feet above sea-level datum of 1929.

## Water levels in well 26/44-32R1 (Washington Water Power Co. No. 46)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1931—Con.</b>		<b>1934</b>		<b>1937</b>	
Mar. 15.....	53.54	Mar. 30.....	51.78	Jan. 24.....	61.09	Feb. 5.....	48.39
		Apr. 30.....	54.44	Mar. 15.....	1 54.72	Apr. 13.....	55.34
		May 29.....	56.16	May 2.....	59.17	June 8.....	59.88
<b>1929</b>		June 29.....	52.21	June 20.....	54.14	July 6.....	1 52.44
Apr. 12.....	50.71	July 28.....	1 48.04	Aug. 8.....	52.76	Sept. 7.....	50.20
June 29.....	51.05	Aug. 28.....	1 47.98	Oct. 4.....	51.05	Nov. 9.....	52.84
July 30.....	49.03	Oct. 9.....	49.54	Nov. 21.....	1 48.03	Dec. 21.....	53.22
Aug. 23.....	51.24	Dec. 10.....	1 45.86				
Nov. 7.....	49.74						
Dec. 5.....	49.48						
		<b>1932</b>		<b>1935</b>		<b>1938</b>	
<b>1930</b>		Jan. 15.....	48.36	Jan. 18.....	51.82	Jan. 21.....	54.34
Jan. 14.....	48.99	Feb. 11.....	48.64	Mar. 15.....	52.18	Mar. 18.....	1 51.87
Feb. 21.....	1 47.69	Mar. 23.....	1 49.81	Apr. 29.....	57.28	18.....	52.80
Mar. 18.....	48.92	Apr. 25.....	59.31	June 26.....	1 54.77	18.....	53.33
June 13.....	1 50.51	May 23.....	1 60.72	Aug. 16.....	1 49.74	18.....	53.57
July 10.....	51.83	July 16.....	1 52.09	Oct. 2.....	1 49.49	18.....	53.65
Aug. 19.....	51.02	Nov. 26.....	1 50.79	Nov. 18.....	50.38	18.....	53.70
Sept. 19.....	50.39					Apr. 14.....	53.70
Oct. 23.....	49.42	<b>1933</b>		<b>1936</b>		27.....	56.29
Nov. 20.....	48.82	Mar. 17.....	50.86	Jan. 13.....	50.29	May 19.....	58.95
Dec. 24.....	48.62	May 4.....	57.84	Feb. 21.....	49.54	June 9.....	60.87
		June 13.....	1 59.14	May 1.....	57.99	30.....	1 59.05
<b>1931</b>		July 15.....	1 54.14	June 22.....	1 53.39	July 17.....	57.76
Jan. 30.....	48.16	Aug. 29.....	1 48.82	Aug. 22.....	50.81	Aug. 5.....	1 54.26
Feb. 25.....	48.54	Oct. 11.....	50.79	Oct. 8.....	49.21	26.....	1 54.29
		Nov. 27.....	52.39	Nov. 27.....	48.73	Sept. 17.....	1 54.53
						Oct. 17.....	54.08
						Nov. 15.....	1 54.08
						Dec. 8.....	52.62

1 Pump operating in well.

\* Pump stopped immediately before measuring water level.

## Well 50/5W-1A1 (Washington Water Power Co. No. 96)

OWNER.—Post Falls Irrigated District.

LOCATION.—In the NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 1, T. 50 N., R. 5 W., about 1,200 feet south and 400 feet west of cross road at northeast corner of section, 50 feet north of T-lane west, in frame shed.

DESCRIPTION.—Public-supply dug well, 230 feet deep and 2.5 feet in diameter, open-bottom concrete-tile casing. Turbine pump with 40-horsepower motor.

MEASURING POINT.—Top of I-beam pump support, level with land surface and 2,192.90 feet above sea-level datum of 1929.

BENCH MARK.—About 135 feet east of well and along north side of lane, in root on south side of 12-inch pine stump, a copper nail with washer; 2,195.24 feet above datum.

WATER LEVELS.—First measured August 23, 1929. Lowest and highest levels yet recorded (both pumping levels), December 8, 1931, and August 7, 1934, respectively; range, 25.41 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,944.20 feet above sea-level datum of 1929.

## Water levels in well 50/5W-1A1 (Washington Water Power Co. No. 96)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1929		1931—Con.		1934		1937	
Aug. 23	52.5	July 27	142.07	Jan. 23	158.42	Jan. 27	149.62
Dec. 2	48.0	Aug. 27	140.88	Mar. 15	158.60	Apr. 13	148.05
		Oct. 6	138.92	May 2	159.62	June 7	150.01
1930		28	137.92	June 20	160.17	July 7	151.16
		Dec. 8	136.36	Aug. 7	161.77	Sept. 3	152.90
Jan. 10	46.86	1932		Oct. 4	159.83	Nov. 10	150.24
Feb. 17	45.72			Nov. 21	157.45	Dec. 23	148.55
Mar. 17	46.11	Jan. 11	137.12	1935		1938	
May 12	43.74	Feb. 11	136.85	Jan. 17	155.72	Jan. 21	48.35
June 12	44.08	Mar. 22	136.67	Mar. 14	154.50	Mar. 19	148.55
July 9	45.26	Apr. 15	137.68	May 1	154.70	Apr. 13	149.40
Aug. 18	45.47	May 24	143.84	June 26	157.59	26	150.53
Sept. 18	44.39	July 15	149.00	Aug. 15	60.29	May 18	152.10
Oct. 23	42.84	Oct. 25	149.40	Oct. 2	158.88	June 9	53.50
Nov. 24	41.30	1933		Nov. 19	156.28	29	53.80
Dec. 22	40.23			Dec. 31	153.77	July 13	154.98
1931		Mar. 17	146.92	1936		Aug. 4	156.50
		May 5	147.55	Feb. 25	153.04	26	156.20
Jan. 30	138.70	June 13	150.11	May 1	153.28	Sept. 19	155.72
Feb. 24	137.36	July 17	152.65	June 23	155.97	Oct. 19	154.46
Mar. 27	136.91	Aug. 29	155.07	Aug. 21	157.39	Nov. 15	153.41
Apr. 28	137.56	Oct. 10	153.26	Oct. 6	156.30	Dec. 9	152.51
May 26	138.16	Nov. 28	151.51	Nov. 27	152.38		
June 25	140.15	Dec. 28	151.65				

<sup>1</sup> Pump operating in well.

## Well 50/5W-5M1 (Washington Water Power Co. No. 60)

OWNER.—R. J. Humes.

LOCATION.—In the NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 5, T. 50 N., R. 5 W.

DESCRIPTION.—Dug well, 121 feet deep and 2 feet square, open-bottom wood curbing.

MEASURING POINT.—Top of well cover, level with land surface and 2,096.70 feet above approximate sea-level datum.

BENCH MARK.—None.

WATER LEVELS.—First measured March 7, 1928. Well dry repeatedly; highest static level yet recorded, May 2, 1934; range, at least 16.3 feet.

Measurements by the Washington Water Power Co. Measurements given in feet above a local datum, which is 1,900.00 feet above approximate sea-level datum.

*Water levels in well 50/5W-5M1 (Washington Water Power Co. No. 60)*

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1930—Con.</b>		<b>1934</b>		<b>1936</b>	
Mar. 7	83.00	July 9	( <sup>1</sup> )	Jan. 23	90.29	Feb. 25	81.83
<b>1929</b>		<b>1932</b>		Mar. 14	90.32	Apr. 30	87.81
Mar. 19	78.40	Mar. 21	( <sup>1</sup> )	May 2	92.71	June 23	88.73
July 1	85.79	Apr. 26	77.33	June 20	91.05	Aug. 21	85.65
July 29	80.38	May 23	82.92	Aug. 7	89.00	Oct. 6	83.52
Aug. 23	80.01	July 15	82.30	Oct. 4	86.91	Nov. 27	81.37
Oct. 3	78.84	Nov. 26	78.77	Nov. 20	85.55	<b>1937</b>	
Nov. 7	77.18	<b>1933</b>		<b>1935</b>		Feb. 5	( <sup>1</sup> )
Dec. 2	76.19	Mar. 17	77.53	Mar. 14	84.30	June 7	86.12
<b>1930</b>		May 5	82.16	May 1	87.80	July 7	( <sup>1</sup> )
Jan. 14	( <sup>1</sup> )	June 13	85.80	June 26	90.29		
Feb. 17	( <sup>1</sup> )	July 17	85.14	Aug. 15	87.55		
Mar. 17	( <sup>1</sup> )	Aug. 28	82.80	Oct. 1	86.60		
May 12	76.76	Oct. 10	81.42	Nov. 19	83.54		
June 11	76.45	Nov. 28	80.91	Dec. 31	81.64		

<sup>1</sup> Well dry.<sup>2</sup> Well dry; 16 readings in period.<sup>3</sup> Discontinued as observation well.*Well 50/6W-12K1 (Washington Water Power Co. No. 43)*

OWNER.—F. P. Miles.

LOCATION.—In the NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 12, T. 50 N., R. 6 W.

DESCRIPTION.—Dug well, 105 feet deep and 3 feet square, open-bottom wood curbing.

MEASURING POINT.—Top of well cover, 6.4 feet above land surface and 2,064.76 feet above approximate sea-level datum.

BENCH MARK.—None.

WATER LEVELS.—First measured March 6, 1928. Well dry repeatedly in 1930-31; highest static level yet recorded, January 24, 1934; range, at least 15.8 feet.

Measurements by the Washington Water Power Co. Measurements given in feet above a local datum, which is 1,900.00 feet above approximate sea-level datum.

*Water levels in well 50/6W-12K1 (Washington Water Power Co. No. 43)*

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<b>1928</b>		<b>1930</b>		<b>1931</b>		<b>1932</b>	
Mar. 6	61.96	Jan. 14	54.76	Jan. 29	( <sup>1</sup> )	Mar. 21	54.92
<b>1929</b>		Feb. 17	( <sup>1</sup> )	Feb. 27	( <sup>1</sup> )	Apr. 26	58.79
Mar. 19	57.95	Mar. 17	( <sup>1</sup> )	Mar. 26	( <sup>1</sup> )	May 23	64.72
July 28	60.43	May 12	56.91	Apr. 28	( <sup>1</sup> )	July 15	62.16
July 27	59.33	June 11	56.51	May 26	54.31	Nov. 26	57.86
Aug. 22	58.89	July 9	55.57	June 29	( <sup>1</sup> )	<b>1934</b>	
Oct. 3	57.85	Aug. 18	54.92	July 28	( <sup>1</sup> )	Jan. 24	69.67
Nov. 7	56.26	Sept. 18	54.66	Aug. 26	( <sup>1</sup> )	Mar. 14	69.22
Dec. 2	55.29	Oct. 22	( <sup>1</sup> )	Oct. 6	( <sup>1</sup> )	Apr. 30	( <sup>2</sup> )
		Nov. 19	( <sup>1</sup> )				
		Dec. 22	( <sup>1</sup> )				

<sup>1</sup> Well dry.<sup>2</sup> Discontinued as observation well.

## Well 51/5W-33D1 (Washington Water Power Co. No. 58)

OWNER.—Spokane International Ry. Co., Grand Junction watering station, Idaho.

LOCATION.—In the NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 33, T. 51 N., R. 5 W., in frame pump house 35 feet south of center line of Spokane International Ry. Co. tracks, and 210 feet west of center line of Northern Pacific Ry. Co. Lift pump with gasoline engine.

DESCRIPTION.—Railroad dug well, 173 feet deep and 5 feet in diameter, open-bottom steel casing 20 inches in diameter and 20 feet long, at bottom of well. Plunger pump.

MEASURING POINT.—Top face of north 6- by 6-inch I-beam pump support, marked by chiseled cross; 1.5 feet above land surface and 2,139.64 feet above sea-level datum of 1929 plus 0.36 foot correction for inclination of tape.

BENCH MARK.—About 25 feet northwest of well, east side of water tank, on top of concrete footing, a chiseled square; altitude 2,140.98 feet above sea-level datum of 1929.

WATER LEVELS.—First measured March 8, 1928. Lowest and highest static levels yet recorded, February 11, 1932, and May 2, 1934, respectively; range, 23.89 feet.

Measurements prior to March 18, 1938, by the Washington Water Power Co.; thereafter alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,913.45 feet above sea-level datum of 1929.

## Water levels in well 51/5W-33D1 (Washington Water Power Co. No. 58)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1928</i>		<i>1931—Con.</i>		<i>1934</i>		<i>1937</i>	
Mar. 8	72.70	Mar. 30	60.72	Jan. 23	78.96	Feb. 5	<sup>1</sup> 68.92
		May 5	62.06	Mar. 14	79.87	Apr. 13	69.70
		May 27	62.74	May 2	82.00	June 7	73.46
<i>1929</i>		June 25	62.85	June 20	81.23	July 7	75.87
Mar. 18	70.24	July 27	62.68	Aug. 7	79.96	Sept. 3	72.10
June 28	70.84	Aug. 26	62.10	Oct. 4	78.08	Nov. 10	69.83
July 29	67.40	Oct. 6	61.02	Nov. 21	76.36	Dec. 23	68.98
Aug. 23	69.26	29	60.20				
Oct. 3	69.24	Dec. 8	58.71	<i>1935</i>		<i>1938</i>	
Nov. 7	67.86			Mar. 14	75.56	Jan. 21	68.97
Dec. 2	66.87	<i>1932</i>		May 1	76.86	Mar. 19	69.91
		Jan. 14	58.45	June 26	79.42	Apr. 13	71.25
<i>1930</i>		Feb. 11	58.11	Aug. 16	78.30	Apr. 27	72.99
Jan. 10	65.37	Mar. 21	59.18	Oct. 1	77.33	May 18	74.58
Feb. 17	64.74	Apr. 15	62.31	Nov. 19	74.84	June 9	75.36
Mar. 17	64.79	May 23	69.64	Dec. 31	72.52	June 29	75.40
May 12	68.02	July 15	71.15	<i>1936</i>		July 13	75.20
June 12	<sup>1</sup> 65.70	Nov. 28	68.62	Feb. 25	72.53	Aug. 4	75.05
July 9	65.42			Apr. 30	76.17	Aug. 26	75.33
Aug. 18	65.01	<i>1933</i>		June 23	77.82	Sept. 19	74.64
Sept. 18	64.69	Mar. 17	67.30	Aug. 21	75.98	Oct. 19	<sup>1</sup> 73.34
Oct. 23	<sup>1</sup> 63.32	May 5	70.55	Oct. 6	74.27	Nov. 15	72.27
Nov. 24	62.21	June 13	73.73	Nov. 27	71.47	Dec. 9	71.50
Dec. 22	61.43	July 17	74.17				
		Aug. 28	72.97				
<i>1931</i>		Oct. 10	72.06				
Jan. 30	60.36	Nov. 28	71.33				
Feb. 24	59.86						

<sup>1</sup> Pump operating in well.



## Water levels in well 53/4W-24D1 (Washington Water Power Co. No. 31)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
<i>1929</i>		<i>1932</i>		<i>1934—Con.</i>		<i>1937—Con.</i>	
Sept. 5	21.5	Jan. 15	11.44	Aug. 8	33.88	June 8	21.80
Dec. 3	19.7	Mar. 22	11.65	Oct. 4	32.24	July 7	23.15
<i>1930</i>		Apr. 15	12.12	Nov. 21	30.35	Sept. 3	23.17
Jan. 14	18.94	May 24	15.92	<i>1935</i>			
Feb. 18	18.20	July 15	21.41	May 1	28.37	Oct. 22	22.63
Mar. 19	( <sup>1</sup> )	Oct. 28	21.63	June 26	31.31	Nov. 10	22.35
Oct. 28	( <sup>1</sup> )	<i>1933</i>		Aug. 15	32.10	<i>1937</i>	
Dec. 1	13.23	Apr. 4	19.93	Oct. 2	31.20	Jan. 21	21.57
Dec. 23	14.48	May 5	20.64	Nov. 19	30.42	Mar. 21	22.58
<i>1931</i>		June 12	23.18	Dec. 31	27.60	Apr. 13	23.70
Feb. 5	13.38	July 17	25.35	<i>1936</i>			
Feb. 27	12.88	Aug. 29	25.35	May 1	25.83	May 18	25.60
Mar. 30	12.48	Oct. 10	25.18	June 23	27.79	June 9	27.44
Apr. 28	12.08	Nov. 28	24.17	Aug. 21	27.84	June 29	28.37
May 27	12.63	<i>1934</i>		Oct. 6	26.81	July 14	29.16
June 30	13.90	Jan. 23	25.10	<i>1937</i>			
July 28	13.65	Mar. 15	29.81	Apr. 13	20.95	Aug. 4	28.95
Aug. 27	13.08	May 2	32.98	<i>1938</i>			
Oct. 9	12.82	June 20	34.08	Sept. 19		Sept. 19	28.40
Oct. 29	12.47			Nov. 17		Nov. 17	27.10
Dec. 9	11.68			Dec. 9		Dec. 9	25.84

<sup>1</sup> Well dry; 7 readings in period. Well deepened in Nov. 1930.

<sup>2</sup> Pump operating in well.

## Well 54/4W-27M1

OWNER.—J. C. Natvig, Clagstone, Idaho.

LOCATION.—In the NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 27, T. 54 N., R. 4 W., by road and lane about 2.8 miles southwest of Clagstone, Idaho.

DESCRIPTION.—Unused drilled well, 404 feet deep, diameter 8 inches at top and 6 inches at bottom, open-bottom steel casing.

MEASURING POINT.—Top of coupling on 5 $\frac{1}{2}$ -inch casing in pit, 2.7 feet below land surface and 2,428.67 feet above sea-level datum of 1929.

BENCH MARKS.—About 55 feet southwest of well, in base on northeast side of 18-inch pine tree, a spike; 2,431.65 feet above sea-level datum of 1929. In tree just described, in root on northeast side, a copper nail with washer; 2,431.11 feet above datum.

WATER LEVELS.—First measured March 26, 1938. Lowest level yet recorded, March 26, 1938; highest, August 4, 1938; range, 6.92 feet.

Measurements alternately by the Washington Water Power Co. and the Geological Survey. Measurements given in feet above a local datum, which is 1,996.95 feet above sea-level datum of 1929.

## Water levels in well 54/5W-27M1

Date	Water level	Date	Water level
<i>1938</i>		<i>1938—Con.</i>	
Mar. 26	92.31	Sept. 19	98.64
Apr. 13	93.26	Nov. 17	95.98
Apr. 26	94.47	Dec. 1	95.67
May 18	96.94	Dec. 9	95.44
June 9	98.36		95.70
June 29	98.19		
Aug. 4	99.23		



## INDEX

	Page		Page
Abstract .....	83	Natvig, J. C., well of .....	137
Bings, H. G., well of .....	136	New Method Laundry, well of .....	114-115
Coeur d'Alene Lake, features of .....	87	Nilson, O. B., well of .....	127-128
Country Homes Estates, well of .....	128-129	Ohio Match Co., well of .....	113-114
Drainage in the area .....	87-88	Pend Oreille Lake, features of .....	87
Empire Ice & Shingle Co., well of .....	93-94	Post Falls Irrigated District, well of .....	133
Geology of the area .....	86-87	Purpose of the investigation .....	85
Glacial-outwash plains, character and extent of .....	86-87, pl. 4	Rathdrum prairie, features of .....	85-86
Great Northern Ry. Co., well of .....	129-131	Spokane, city of, wells of .....	94-113
Ground water, level of, fluctuation of .....	90-137, pls. 5-7	county of, well of .....	119-121
movement of .....	89	Spokane International Ry. Co., well of .....	135
perched, occurrence of .....	88	Spokane River, course of .....	87-88
relation of, to Spokane and Little Spokane Rivers .....	89-90	discharge of ground water to .....	89-90
source of .....	88	stage of, fluctuation of .....	91, pl. 6
withdrawal of .....	90	Spokane Valley, features of .....	85-86
Humes, R. J., well of .....	133-134	Streams in the area .....	87-88
Hutton Settlement, well of .....	132	Topography of the area .....	85-86
Inland Empire Paper Co., well of .....	117, 126-127	Trentwood Irrigation District, well of .....	115-116
Jurgens, C. T., well of .....	136-137	Vegalene Co., well of .....	124
Lakes in the area .....	87	Washington Water Power Co., measurements by .....	93-94, 113-123, 124-128, 129-135, 136-137
Lewis, L. A., well of .....	123-124	Water-bearing material, permeability of .....	86-87
Lielman, W. C., well of .....	125	Water table, depth to .....	89
Little Spokane River, discharge of ground water to .....	90	fluctuations of .....	90-137, pls. 5-7
Location and extent of the area .....	84-85	relation of, to Spokane and Little Spokane Rivers .....	89-90
Miles, F. P., well of .....	134	shape of .....	88-89
Modern Electric Water Co., well of .....	118-119, 121-122	Wells, field numbers of, explanation of .....	92-93
Mossell, Jerry, well of .....	116-117	location of .....	pl. 4
		water level in, fluctuation of .....	93-137, pls. 5-7
		withdrawal of water from .....	90

