GROUND-WATER-LEVEL TRENDS IN IDAHO, 1971-82

By H. W. Young and R. F. Norvitch

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CONVERSION FACTORS

For readers who prefer to use metric units, conversion factors for terms used in this report are listed below.

Multiply	By	To obtain
acre	4,047	square meter
acre-foot (acre-ft)	1,233	cubic meter
foot (ft)	0.3048	meter
inch (in.)	25.4	millimeter
mile (mi)	1.609	kilometer

NGVD of 1929 (National Geodetic Vertical Datum of 1929): The term "National Geodetic Vertical Datum of 1929" replaces the formerly used term "mean sea level" to describe the datum for altitude measurements. The geodetic datum is derived from a general adjustment of the first-order leveling networks in both the United States and Canada. For convenience in this report, the datum also is referred to as "sea level."

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ABSTRACT

This report presents water-level trends, net water-level changes, and major causes governing these water-level fluctuations for 366 wells in the statewide observation-well network. Water-level trends were determined for 293 wells. Downward trends in 176 of these wells ranged from less than 1 foot per year to a maximum of 7 feet per year; upward trends in 90 wells ranged from less than 1 foot per year to a maximum of 6 feet per year. Twenty-seven wells showed no change. Net water-level changes were determined for 361 wells. Net declines in 269 of these wells ranged from less than 1 foot to a maximum of 52.65 feet; net rises in 92 wells ranged from less than 1 foot to a maximum of 25.12 feet. Significant net water-level declines and downward trends were most apparent in or near areas designated as critical ground-water areas by the Idaho Department of Water Resources.

INTRODUCTION

Reliance on ground water for irrigation, industrial, municipal, and domestic water supplies is increasing steadily in Idaho. Increasing withdrawals generally are accompanied by declining water levels. These declines result in greater pumping lifts, which can have significant economic impact on well owners and can cause a drain on presently stressed energy sources. Persistent depletion of water in aquifer storage resulting from overwithdrawals also may occur in places, which could cause near collapse of local economies.

Increasing withdrawals may not be the only cause for local or regional ground-water declines, however. Widespread changes in irrigation practices, particularly from flood to sprinkler irrigation, could greatly decrease annual amounts of recharge to the ground-water systems which, in turn, would cause a decline in water levels. In addition, long-term precipitation cycles can affect water levels and cause them to trend upward in wet years and downward in dry years.

Water-level trends reflect the balance between recharge to and discharge from a ground-water system. Water levels rise when recharge exceeds discharge and decline when discharge exceeds recharge. Under natural conditions, the two tend to be in near balance. Under the influence of man's activities, the balance may tip in either direction. If an imbalance remains in effect for several years, water managers and water users would benefit from being aware of its cause, for some decision to take remedial action may be in the best interest of all concerned.

Need for Study

Tens of thousands of ground-water-level measurements have been made on a one-time, periodic, or continuous basis in the State. The earliest systematic measurements on record were made by the U.S. Reclamation Service (now the U.S. Bureau of Reclamation) on the Minidoka Project in about 1910. Since then, thousands of measurements have been recorded in connection with numerous areal water-resource studies made in selected areas.

The present (1982) statewide monitoring network, operated by the U.S. Geological Survey in cooperation with the Idaho Department of Water Resources, began in 1946. Currently, about 360 observation wells are included in this network. The data collected during each water year are published in annual reports ("Water-Resources Data for Idaho") by the U.S. Geological Survey. Other publications that include most of the past water-level measurements are by Stearns, Crandall, and Steward (1936) and Sisco (1974, 1975, and 1976). In addition, an ever-increasing part of the water-level data compiled in the State has been and is continually being stored in the Geological Survey's automatic data-processing system, WATSTORE.

The need for this study arises from the fact that little has been done to determine or interpret the local or regional cause-and-effect relations involved in water-level fluctuations. Some areal-study reports (for example, Mundorff and others, 1964) have presented hydrographs showing water-level fluctuations and an explanation of causes for the fluctuations, but most of the basic information remains uninterpreted. Water managers and water users would benefit from such interpretations. Determination and description of causes for water-level trends on an area-by-area basis might be useful in identifying areas where inordinately high or low water levels may be impending. Decisions involving water-resource management then could be made to mitigate or minimize impacts.

Purpose and Scope

Primary purposes of this report are to: (1) Describe current trends in water-level fluctuations through 1982 in most of the major aquifers in Idaho; (2) relate the trends to governing causes; and (3) show generalized map areas where ground-water levels are either rising or declining on a long-term (several years or more) basis. By providing this information, the report is intended to aid water managers and water users plan for future development and control overdevelopment of ground-water resources in the State.

The scope of the report is limited to evaluation of water-level trends in 366 wells that were part of the statewide observation-well network as of the 1982 water year (October 1, 1981, to September 30, 1982). Locations of these wells are shown on plate 1. Hydrographs for current and discontinued observation wells for the period 1971-82 are available in a report by Young (1983).

Method of Study

Water-level measurements for 366 wells in the statewide observation-well network for the period 1971-82 were retrieved from WATSTORE and computer-generated hydrographs were assembled. Computer-generated cumulative departure curves for precipitation from selected National Weather Service stations also were assembled. Cause for major water-level fluctuations in each well was determined on the basis of water-level hydrographs, cumulative departure curves of precipitation, and irrigated acreage maps. Net water-level changes were determined using March or April water-level measurements for the available period of record. Water-level trends then were determined visually using the hydrographs.

Well-Numbering System

The well-numbering system (fig. 1) used by the U.S. Geological Survey in Idaho indicates the location of wells within the official rectangular subdivision of the public lands, with reference to the Boise base line and meridian. The first two segments of the number designate the township and range. The third segment gives the section number, which is followed by three letters and a numeral to indicate the ¼ section (160-acre tract), ¼-¼ section (40-acre tract), ¼-¼-¼ section (10-acre tract), and serial number

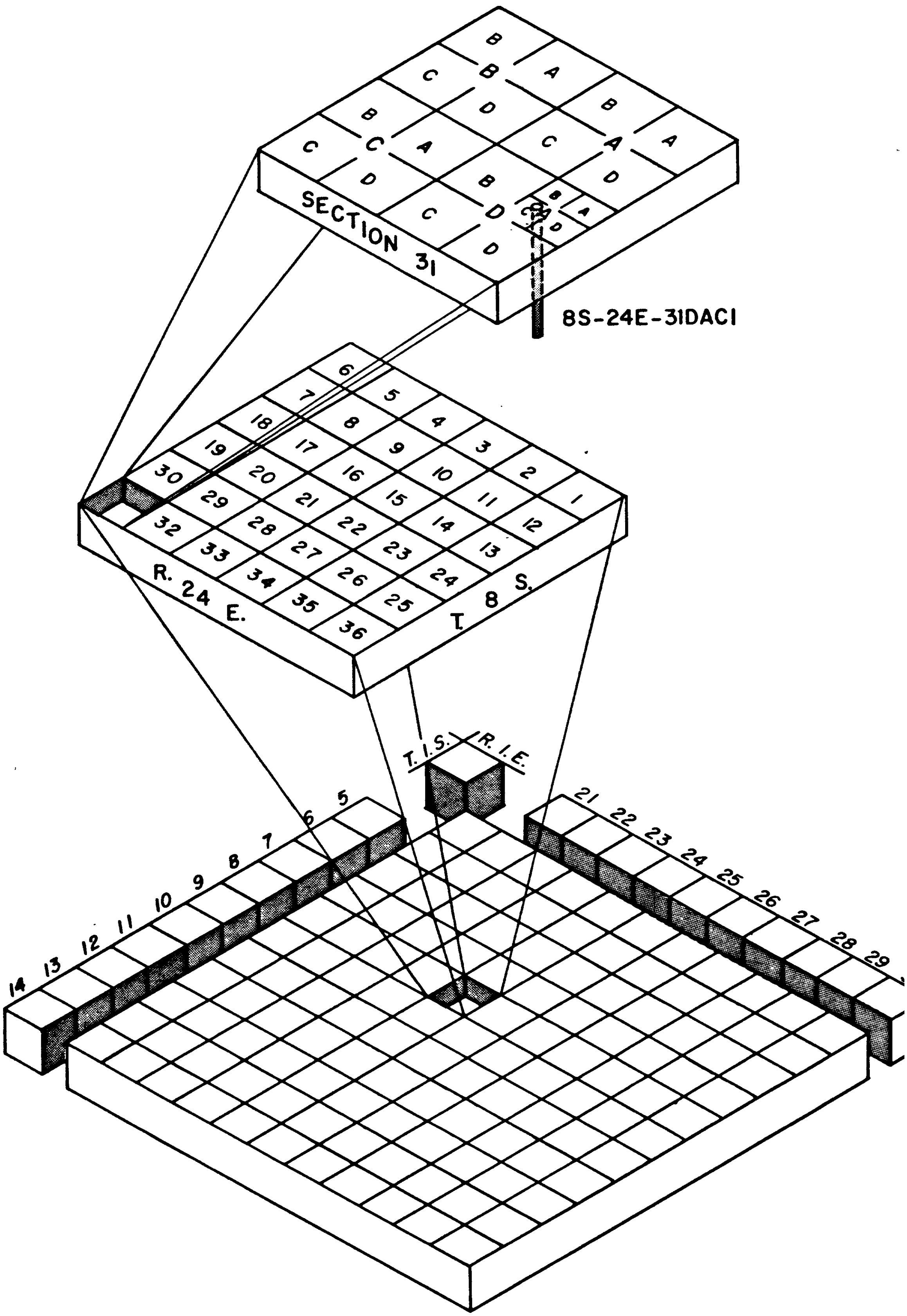

Figure 1.--Well-numbering system.

of the well within the tract, respectively. Quarter sections are lettered A, B, C, and D in counterclockwise order from the northeast quarter of each section. Within quarter sections, 40-acre and 10-acre tracts are lettered in the same manner. Well 8S-24E-31DAC1 is in the SW¼NE¼SE¼ sec. 31, T. 8 S., R. 24 E., and was the first well inventoried in that tract.

MAJOR CAUSES FOR GROUND-WATER-LEVEL FLUCTUATIONS

Basically, three major causes govern ground-water-level fluctuations in Idaho, categorized in this report as (1) diversion of surface water for irrigation, (2) pumping of ground water for irrigation, and (3) climatic conditions. Typical short-term (seasonal) patterns of fluctuation resulting from the different causes are depicted in figure 2 by well hydrographs. An example of a long-term fluctuation is shown in figure 3.

Short-Term Fluctuations

Under natural conditions (well A, fig. 2), water levels are generally highest in spring during the period of maximum recharge from snowmelt; decline through summer when ET (evapotranspiration) rates are high and discharge exceeds recharge; tend to level out, but continue downward, in fall when discharge by ET is greatly reduced; are lowest in winter when ET has stopped and recharge from precipitation is nil; and begin to rise again in spring, to complete the annual cycle.

In surface-water-irrigated areas, where canal losses and seepage from fields constitute the principal recharge, water levels (well B, fig. 2) begin to rise when water is released into canals and fields; reach a plateau of high levels through the summer irrigation season; begin to decline at the end of the growing season; and continue to an annual low just prior to the start of the next irrigation season.

Well B (fig. 2) is shallow (32 ft deep) and the water level in it responds to recharge soon after distribution of surface water for irrigation begins. In comparison, well C is deep (345 ft) and the water levels in it also respond to surface-water irrigation, but the response is delayed by about 4-6 weeks. Response time differs because at well B,

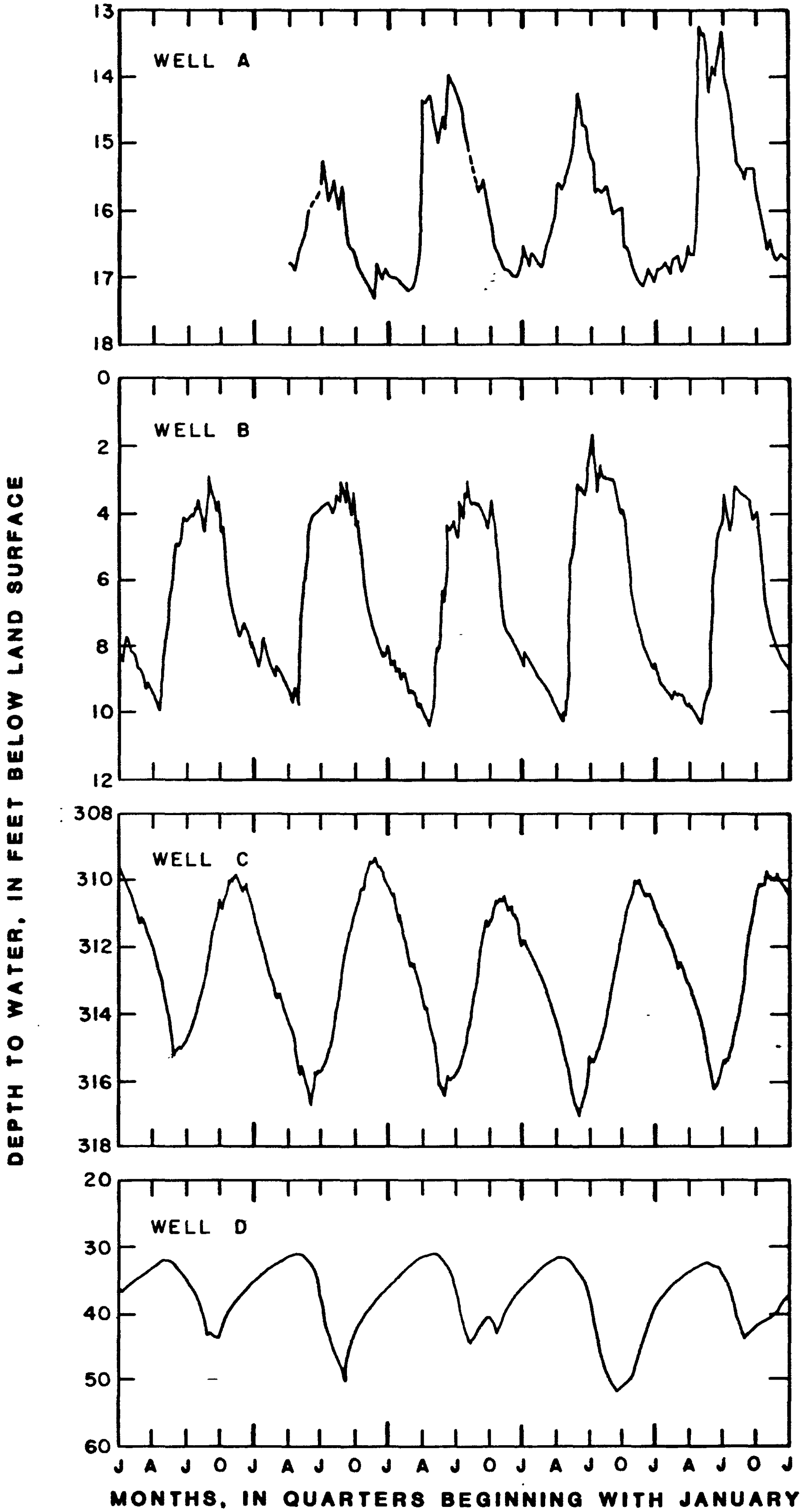

Figure 2.--Typical patterns of short-term water-level fluctuations in four hypothetical wells.

the water applied on the land surface has only 10 ft to percolate to add recharge, whereas at well C, the recharging water must percolate at least 315 ft to the water table. Vertical percolation of water through unsaturated rocks above the water table is relatively slow.

In areas where irrigation water is supplied primarily from ground-water sources (aquifers), the annual cyclic fluctuations described above are reversed (well D, fig. 2). Water levels begin to decline at the start of pumping, generally in late spring; continue to decline through the irrigation season; reach an annual low at the end of the season, at which time they begin an abrupt rise; continue to rise through fall, winter, and early spring; and reach an annual peak just prior to the start of the next irrigation season.

The hydrographs in figure 2 clearly reflect the causes for fluctuations in each well. Such reflection is not as clear on hydrographs for all wells, however. This is because some wells are located in areas where two or all three of the major causes affect water-level fluctuations. In these areas, combinations of typical patterns of fluctuation are displayed on the hydrographs, which make definition of causes difficult. Also, the annual climatic cycle, as depicted by fluctuations in well A, is not absent in wells B, C, and D, but is overshadowed by man-caused effects. Persistence of climatic effects is evident on most long-term hydrographs.

Long-Term Fluctuations

In addition to repetition of seasonal fluctuations, a long-term hydrograph (fig. 3) shows trends in the balance or imbalance between recharge and discharge in an aquifer. The trends generally are caused by: (1) Long-term precipitation cycles; that is, several years of above-normal precipitation followed by several years of below-normal precipitation; (2) continual ground-water withdrawals in excess of recharge; and (3) changes in irrigation practices, which may result in reduction of recharge to an aquifer. The latter can be affected by improvements in irrigation efficiencies, such as changing from furrow and flood irrigation to sprinkler irrigation, and sealing or lining of earthen canals, which reduces water transmission losses.

The long-term hydrograph of water levels in an observation well in the SW¼NE¼SE¼ sec. 31, T. 8 S., R. 24 E., Minidoka County, is shown in figure 3. The well is 194 ft deep and is completed in the Snake River Plain aquifer. The

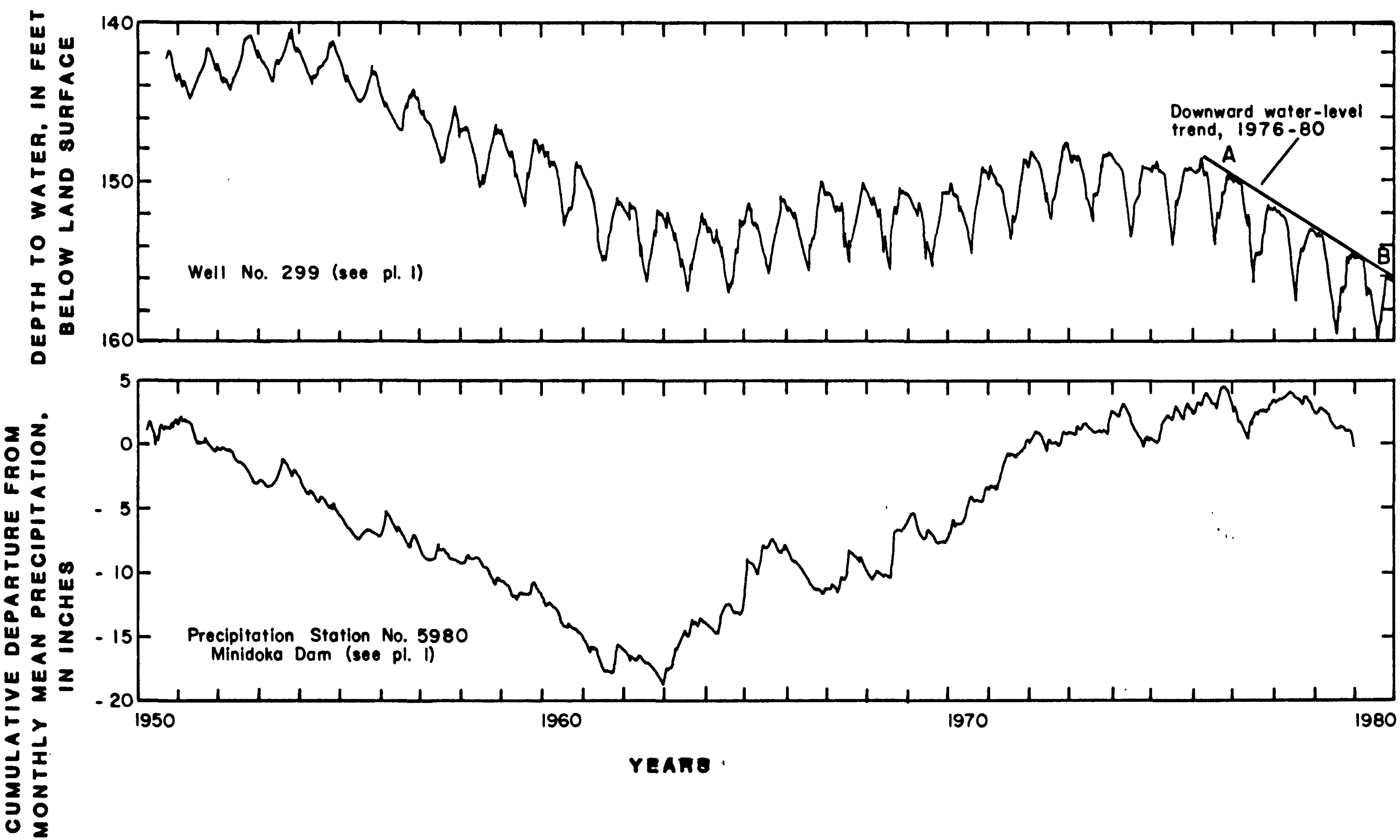

Figure 3.--Comparison of long-term precipitation and ground-water-level trends.

water level reflects water-table fluctuations in the aquifer. The well is located in an area where ground water is pumped for irrigation but is close to an area that is irrigated with surface water diverted from the Snake River. The dominant control on long-term fluctuation trends in this well is precipitation, which controls the surface-water supply for irrigation. However, a gradual overall downward trend caused by ground-water withdrawals also is apparent. These withdrawals may be coupled with improvements in irrigation efficiencies, whose consequential effects can add to the downward trend.

The following is an interpretation of the hydrograph: The effects of one long-term precipitation cycle are apparent on the graph--starting at a peak water level of about 141 ft below land surface in late 1953 and ending at a peak of 148 ft in late 1972. Considering that the wave on the graph, from peak (late 1953) to trough (late 1963) to peak (late 1972), reflects recharge owing to precipitation, and assuming that recharge is more or less in balance from one precipitation cycle to another, then the decline in water levels between these peaks is due primarily to ground-water withdrawals. The persistence is contingent on withdrawals remaining at or above the 1972 level of ground-water development, which seems to be the case.

However, an in-depth interpretation of this hydrograph is more complex. Examination of the graph shows that the annual cyclic fluctuations through about 1954 follow a pattern close to that expected in an area of surface-water irrigation (well C, fig. 2). This pattern occurred despite the fact that ground-water pumpage was increasing in the area of this well (Mundorff and others, 1964, p. 169).

In about 1958, the annual cyclic fluctuations begin to follow a pattern closer to that expected in an area of ground-water irrigation (well D, fig. 2). The latter pattern becomes more pronounced through 1980 as effects of ground-water pumpage progressively dominate over effects of recharge from excess surface-water irrigation.

Further comparison of long-term trends on the hydrograph with trends on the precipitation cumulative departure curve (fig. 3) shows that the two trends begin to deviate noticeably beginning in about 1973. Rather than water levels rising in correspondence with a general continuing rise in precipitation, they tend to decline. This decline may be due partially to a scattered few years of relatively low precipitation. However, the major cause is probably a reduction in aquifer recharge that results from decreased diversions for irrigation coupled with greater reliance on ground-water pumping for irrigation. In the 6-year period from 1975 to 1980, total diversions from Lake Walcott and Milner Lake to lands on the north side of the Snake River show an average annual decrease of 320,000 acre-ft, compared with the prior 6-year period 1969-74 (L. C. Kjelstrom, U.S. Geological Survey, oral commun., 1982). In addition, Haskett and Hampton (1979, p. 17) reported that annual winter diversions in canals below American Falls Dam gradually decreased from 1950 to 1977, and by 1977, were 140,000 acre-ft less than in 1950. The reason for the decrease in diversions seems to reflect a conscientious effort by irrigators to become more efficient in their use of irrigation water, and a general conversion to use of ground water for irrigation, which is a reliable source in drought years. The result is fairly clear: more efficient, and consequently, less use of surface water for irrigation contributes to water-level declines in parts of the Snake River Plain aquifer.

The line A-B (fig. 3) shows the 1976-80 water-level trend in this particular well, which is downward at a rate of 1.4 ft/yr. The current water-level trend (table 1) is downward at a rate of 1 ft/yr from 1976 through 1982. The line is drawn on the annual peak water levels because they are most representative of natural conditions in an area dominated by ground-water irrigation, as explained above.

The foregoing discussion gives an example of the rationale used to interpret causes for water-level fluctuations and to describe trends. The remainder of this report gives water-level-change data for the period 1971-82, where available; describes current trends and probable causes for the trends; and delineates areas of either rising or declining water levels, as reflected in the 366 active observation wells located throughout Idaho in 1982.

SIGNIFICANT WATER-LEVEL CHANGES AND TRENDS

Selected hydrologic data for wells in the statewide observation-well network for the period 1971-82 are given in table 1 (back of report). Net water-level changes were determined for 361 wells. Net water-level declines in 75 percent, or 269 of these wells, ranged from less than 1 ft to a maximum of 52.65 ft. Figure 4 shows net water-level declines between 5 and 10 ft and more than 10 ft. Significant net water-level declines were most apparent in or near critical ground-water areas designated by the Idaho Department of Water Resources (see pl. 1). Notable exceptions,

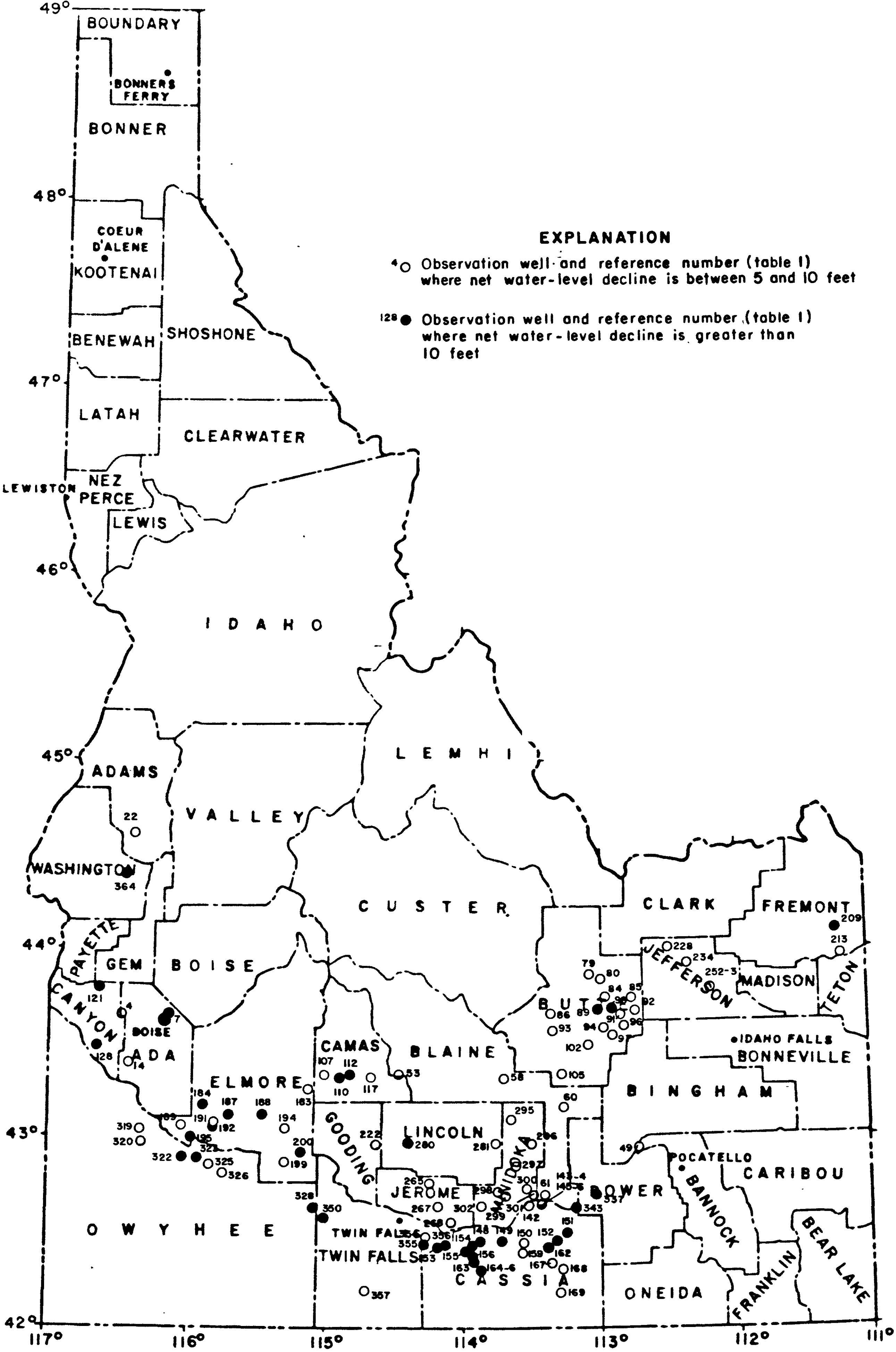

Figure 4. -- Significant net water-level declines.

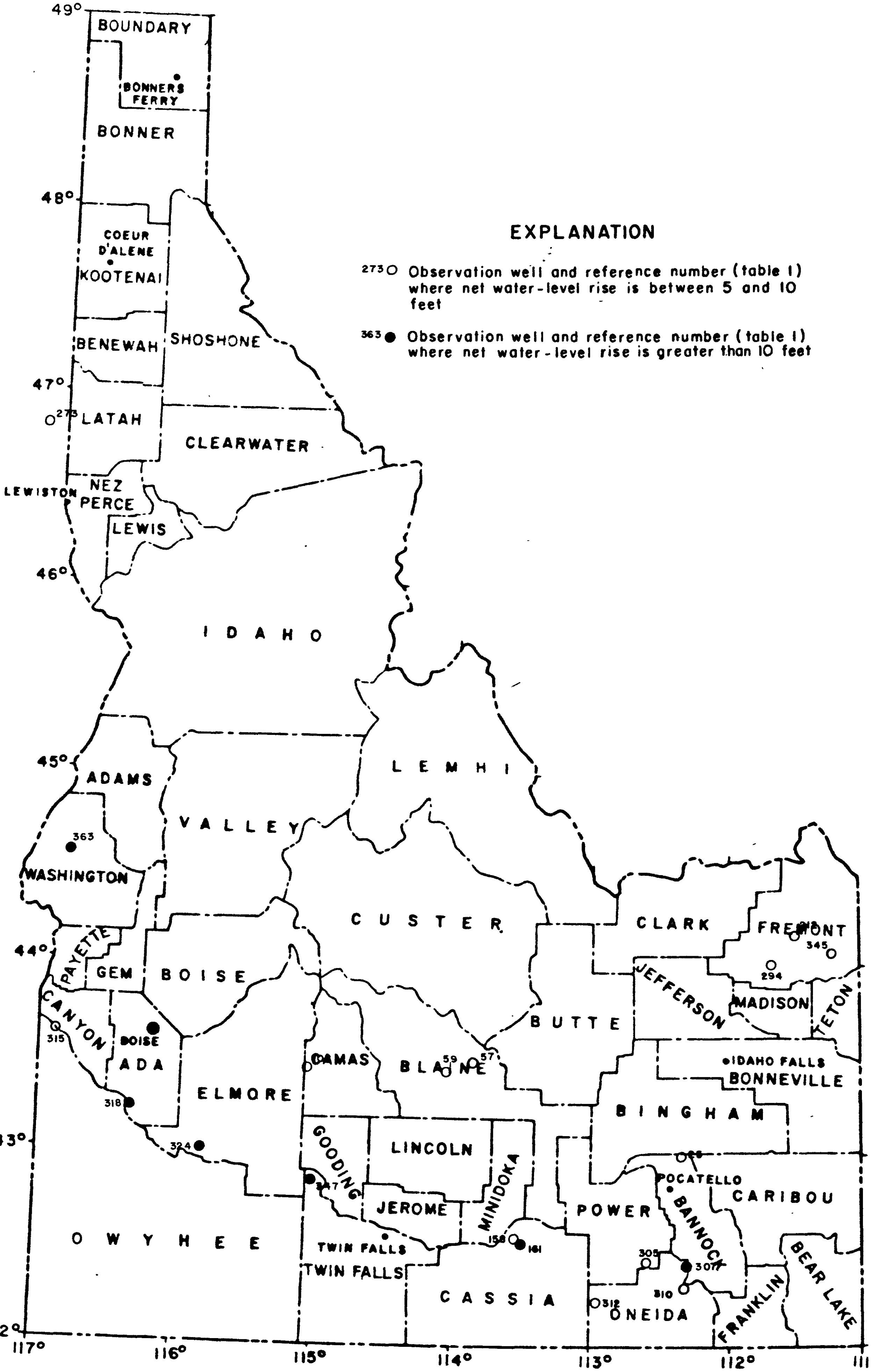

Figure 5.--Significant net water-level rises.

however, include parts of northern Owyhee, southern Elmore, southern Canyon, and Camas Counties where ground-water development has occurred. Declines, generally between 5 and 10 ft, were apparent throughout most of the Snake River Plain aquifer.

Net water-level rises ranged from less than 1 ft to a maximum of 25.12 ft in 92 wells in the statewide observation-well network. Figure 5 shows net water-level rises between 5 and 10 ft and more than 10 ft. As shown by figure 5, wells with significant net water-level rises are scattered and are probably the result of local climatic conditions or changes in irrigation practices.

Water-level trends were determined for 293 wells listed in table 1. Trends were level (no change) in 9 percent, or 27 of these wells; whereas downward trends in 60 percent, or 176 wells, ranged from less than 1 ft/yr to a maximum of 7 ft/yr. Figure 6 shows downward trends between 1 and 2 ft/yr and more than 2 ft/yr. Most downward trends occurred in or near critical ground-water areas. Figures 4 and 6 are similar; in most instances, they differ only where recent trends have leveled off from earlier periods of decline.

Upward water-level trends in 90 wells in the statewide observation-well network ranged from less than 1 ft/yr to a maximum of 6 ft/yr. Figure 7 shows upward trends between 1 and 2 ft/yr and more than 2 ft/yr. As shown by figure 7, only 20 wells had significant upward trends. Most of these wells were affected by surface-water irrigation and climatic changes that resulted in increased recharge.

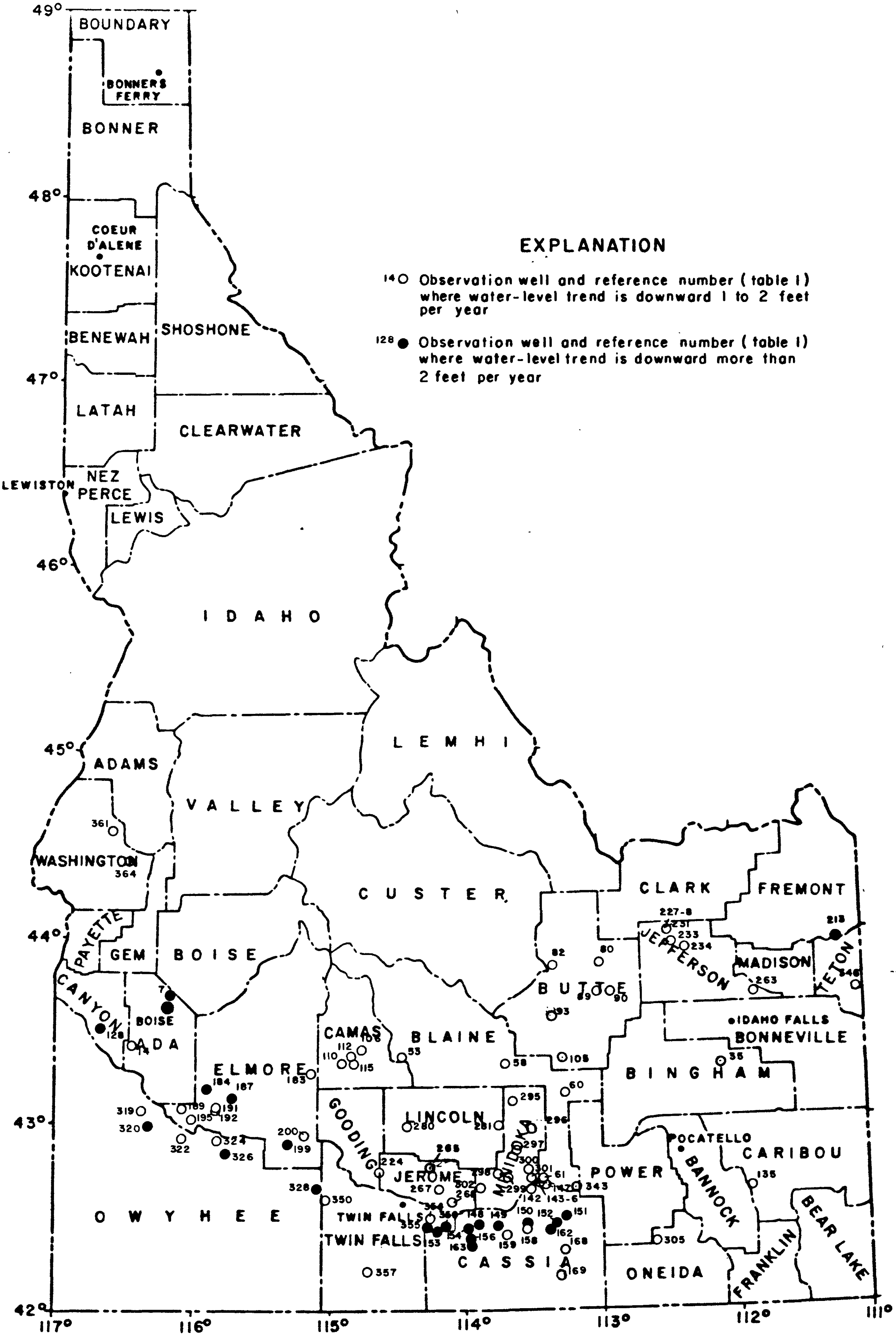

Figure 6. -- Significant downward water-level trends.

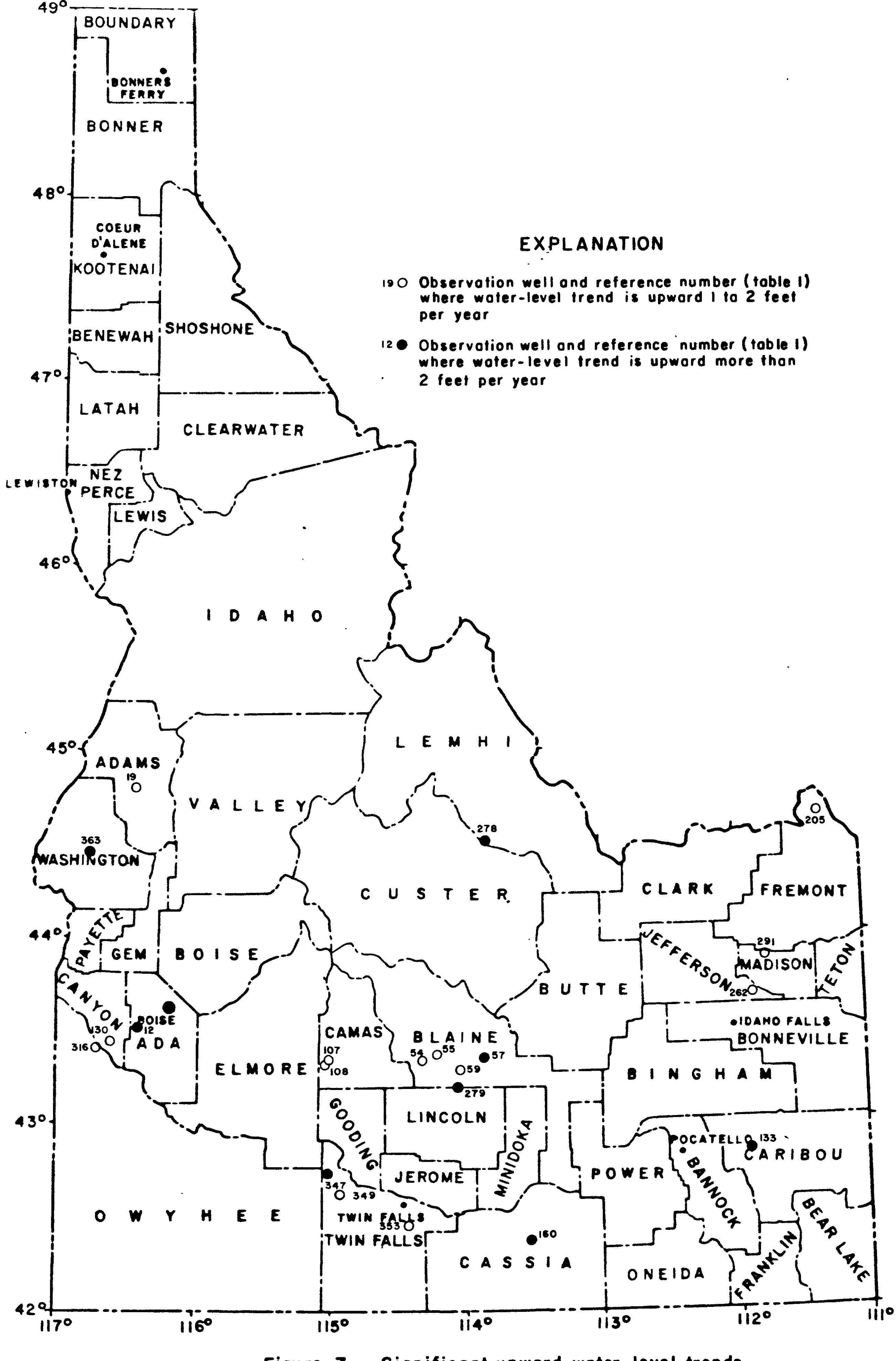

Figure 7.-- Significant upward water-level trends.

SUMMARY

Ground-water-level fluctuations in Idaho are governed by three major causes: (1) Diversion of surface water for irrigation, (2) pumping of ground water for irrigation, and (3) climatic conditions. In most wells, water-level fluctuations are influenced by recharge from surface-water irrigation and ground-water withdrawals.

Water-level trends were determined for 293 wells. Downward trends in 176 wells ranged from less than 1 ft/yr to a maximum of 7 ft/yr. Upward trends in 90 wells ranged from less than 1 ft/yr to a maximum of 6 ft/yr. Trends were level (no change) in 27 wells.

Net water-level changes were determined for 361 wells in the statewide observation-well network. Net declines in 269 wells ranged from less than 1 ft to a maximum of 52.65 ft. Net rises in 92 wells ranged from less than 1 ft to a maximum of 25.12 ft.

Significant net water-level declines and downward trends were most apparent in or near critical ground-water areas. Other notable areas of declining water levels include parts of northern Owyhee, southern Elmore, southern Canyon, and Camas Counties where ground-water withdrawals are large. Significant declines also were apparent throughout most of the Snake River Plain aquifer.

Most of the significant net water-level declines and downward water-level trends have occurred in or near areas of ground-water development where the ground-water systems are not recharged in part by surface-water irrigation.

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HEADNOTES FOR TABLE 1

Aquifer rock type or geologic unit:

Alluvium-------------------------------ALVM
American Falls Lake Beds-------------AMCF
Banbury Formation--------------------BNBR
Basalt of Snake River Group----------SKRV
Bruneau Formation--------------------BRUN
Columbia River Basalt Group----------CBRV
Glacial Outwash----------------------OTSH
Glenns Ferry Formation---------------GLFR
Huckleberry Ridge Tuff---------------HKBR
Idaho Group--------------------------IDHO
Idavada Volcanics--------------------IDVD
Lava Creek Tuff----------------------LVCK
Limestone----------------------------LMST
Melon Gravel-------------------------MEON
Neeley Formation---------------------NELY
Older Terrace Gravel-----------------TRRCO
Raft Formation-----------------------RAFT
Salt Lake Formation------------------SLLK
Sedimentary rocks--------------------SDMS
Starlight Formation------------------SRLG
Sunbeam Formation--------------------SNBM
Tertiary sedimentary rocks-----------TSDMS
Valley-fill deposits-----------------VLFL
Volcanic rocks-----------------------VLCC
Younger Terrace Gravel---------------TRRCY

Major cause for water-level fluctuations:

1. Diversion of surface water for irrigation
2. Pumping of ground water for irrigation
3. Climatic conditions

Net water-level change:

a, Date is 1971-82 unless otherwise noted
+, Increase
-, Decline

Water-level trend:

+, Rise
-, Decline

Probable cause of trend or remarks:

A - Increased recharge from surface-water irrigation
B - Reduced recharge from surface-water irrigation
C - Increased recharge (climatic?)
D - Reduced recharge (climatic?)
E - Increased recharge
F - Reduced recharge
G - Increased ground-water withdrawals
H - Reduced ground-water withdrawals
I - Ground-water withdrawals

Notations: ----, Unknown

Table 1.--Selected hydrologic data for current statewide observation wells

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Ada County					
1	5N- 1W-36ABB1	105	IDHO	1	a	-0.10	----	----	No definable trend
2	5N- 1E-34DBB1	175	TRRCY	1	a	+.92	----	----	----do------------
3	4N- 1W-13DDB1	130	GLFR	1	a	-.96	----	----	----do------------
4	31AAA1	462	IDHO	2	a	-5.46	----	----	----do------------
5	35AAA1	44	TRRCY	1	a	+1.58	1979-82	+0.60	A
6	4N- 2E-19CCC1	104	ALVM	1	a	+.64	1977-82	+.40	A
7	26CCC1	741	IDHO	2	a	-52.65	1976-82	-7.00	I
8	3N- 1E- 5AAB2	82	TRRCY	1	a	+.49	----	----	No definable trend
9	36ADA1	330	TRRCO	1	a	+.18	----	----	No definable trend, missing record
10	3N- 2E-21BCC1	58	TRRCY	1	a	-4.60	1971-82	-.40	B
11	3N- 3E-33DAA1	127	IDHO	2(?)	a	+.11	1980-82	+.50	H(?)
12	2N- 1W-11ADA1	130	TRRCO	1,2	a	+.92	1978-82	+2.50	H,A
13	2N- 1E-36BBB1	305	IDHO	2	a	-3.50	1978-82	+.50	H
14	1N- 1W-27ADD1	500	TRRCO	2	1976-80	-6.26	1977-80	-1.00	I
15	1N- 2E-15DCA1	600	IDHO	2	a	-3.19	1980-82	+.10	H(?)
16	1S- 1E- 6CCD1	560	IDHO	3	a	+.24	----	----	No definable trend
17	1S- 4E-30AAC1	637	BRUN	3	a	+3.49	1971-82	+.30	Unknown
18	2S- 4E- 9DDD2	570	BRUN	2	a	-.31	1977-82	-.60	I
				Adams County					
19	17N- 1W-15ACC1	131	SDMS	2,3(?)	1974-82	-0.90	1980-82	+1.00	C
20	16N- 1W- 3DDD2	79	ALVM	2	a	+.06	1980-82	+.30	C
21	22BAA1	390	CBRV	2	1976-82	-.31	1979-82	+.50	C
22	15N- 1W-22BAD1	175	SDMS	2	1975-82	-7.67	1980-82	+.30	C
23	14N- 1W-11CCC1	163	CBRV	3,2(?)	a	+3.65	----	----	No definable trend
				Bannock County					
24	5S-34E-20CBB2	155	ALVM	1	a	-1.47	1980-82	Level	
25	7S-35E-23CAA1	86	ALVM	3	a	+9.97	----	----	No definable trend
26	10S-36E- 8DDD1	216	SLLK	3	a	-4.87	1979-82	-0.75	D
27	11S-37E-16BBB1	65	ALVM	3	a	+1.19	1979-82	+.50	C
				Bear Lake County					
28	13S-43E-35CCD1	500	SLLK	3	a	-0.40	1979-82	+0.60	E
29	13S-44E-26BAD1	170	SLLK	1	a	-1.27	1980-82	-.40	B
				Bingham County					
30	3N-32E-13DCA1	790	SKRV	2	a	-4.67	1978-82	-0.40	I
31	2N-31E-35DCC1	636	SKRV	2	a	-3.41	1978-82	-.30	I
32	1N-30E-10BBA1	564	SKRV	2	a	-3.62	1979-82	-.20	I
33	1S-30E-15BCA1	752	SKRV	2	a	-2.98	1978-82	-.30	I
34	1S-35E-11CAD1	297	SKRV	2	1972-82	-3.46	1978-82	-.10	I
35	1S-37E-28AAA1	62	ALVM	1	1971-79	-2.85	1975-79	-1.25	B
36	36CDA1	415	SLLK	1	a	-2.20	1978-82	+.60	A

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Bingham County--Continued					
37	2S-32E-23BBB1	194	SKRV	1	a	-2.45	1980-82	+0.10	A
38	2S-34E-33BBA1	40	SKRV	1	a	-1.99	1980-82	+.25	A
39	2S-36E-36CDD1	98	SLLK	1	a	-.15	1978-82	+.10	A
40	3S-33E-14BBA1	44	SKRV	1	a	-1.60	----	----	No definable trend
41	17AAD1	185	SKRV	2	a	-2.84	1980-82	+.15	A,H
42	4S-31E-20BBB1	201	SKRV	2	a	-4.12	1978-82	-.30	B,I
43	36ABA1	17	AMCF	1	a	-1.31	1979-82	+.20	A
44	4S-32E-13CBB1	60	SKRV	1	a	-.99	----	----	No definable trend
45	4S-33E- 3CBB2	53	SKRV	1	a	-1.15	----	----	----do----------------
46	5S-30E-12BBA1	200	SKRV	2	a	-2.27	1979-82	-.20	I
47	5S-31E-19DDC1	61	SKRV	2	1971-81	-2.04	1978-81	-.10	I
48	27ABA1	49	SKRV	1	a	+2.86	1977-82	+.40	A
49	5S-32E-18CDC1	240	ALVM	2	a	-7.70	----	----	No definable trend
50	6S-31E-16BAA1	134	----	1	a	-.49	1978-82	+.30	A
				Blaine County					
51	4N-17E-13AAB1	187	ALVM	3	1977-82	+0.66	1979-82	+0.15	E
52	1N-18E- 1DAA1	85	ALVM	1,3	a	-2.62	1980-82	+.80	C
53	1S-17E-17BBB1	154	BRUN	2	1977-82	-9.04	1980-82	-1.25	I
54	1S-18E-14AAB1	120	SDMS	1,2	a	-1.01	1980-82	+2.00	A
55	1S-19E- 3CCB2	51	ALVM	1	a	-.98	1980-82	+1.25	A
56	22AAA1	150	ALVM	1	a	-.38	1980-82	+.50	A
57	1S-22E- 9CCA1	98	SKRV	3	a	+6.65	1979-82	+3.25	E
58	1S-23E-26CCC1	1,031	SKRV	3,2(?)	1973-82	-8.84	1980-82	-1.25	I(?)
59	2S-20E- 1ACC2	209	SKRV	1,3	a	+7.65	1979-82	+1.80	E
60	3S-27E-24DDA1	901	SKRV	1,2(?)	1972-82	-9.04	1980-82	-1.00	I(?),B
61	8S-26E-33BCB1	242	SKRV	1	a	-7.03	1978-82	-1.25	B
62	33BCB2	33	SKRV	1,3	a	-.13	----	----	No definable trend; water level responds to altitude of water surface in Lake Walcott
				Boise County					
63	9N- 4E-22BDD1	111	ALVM	3	a	+0.39	----	----	No definable trend
				Bonneville County					
64	3N-34E-32BBC1	786	SKRV	1,2	a	-4.15	1978-82	-0.25	B,I
65	3N-37E- 2CBD1	508	SKRV	1	a	+.15	1980-82	-.50	B
66	3N-38E-22BAB1	155	SKRV	1	1974-82	+.86	1976-82	Level	
67	3N-40E- 8BAA1	425	SLLK	1	a	+.18	1971-82	Level	
68	2N-35E- 2BBC1	800	SKRV	1,3	a	-4.56	1979-82	-.50	B
69	2BBC2	982	SKRV	1,3	a	-4.18	1979-82	-.50	B
70	2BBC3	1,147	SKRV	1,3	a	-4.30	1979-82	-.50	B
71	2N-38E-16ADD1	225	SKRV	1	a	+4.49	1978-82	+.40	A
72	1N-36E- 1CCB1	217	SKRV	1	a	-4.08	1980-82	-.40	B
73	1N-37E-15BBA1	140	SKRV	1	1974-82	-2.35	1980-82	Level	
74	15BBA2	255	SKRV	1	1974-82	-2.44	1980-82	Level	
75	15BBA3	356	SKRV	1	1974-82	-1.77	1980-82	Level	

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Butte County					
76	10N-27E-19CAA1	128	ALVM	2	a	-0.20	1979-82	Level	
77	7N-31E-34BDD1	320	SKRV	2,3	a	-2.41	1977-82	-0.75	I(?)
78	6N-25E- 3AAA1	92	ALVM	3	a	-1.63	1979-82	+.30	E
79	6N-28E-13DDA1	201	ALVM	2,3	a	-5.59	1980-82	+.25	C
80	6N-29E-16DDD1	100	ALVM	2	a	-6.15	1977-82	-1.00	I
81	6N-31E-27BAD1	1,200	SKRV	3,2(?)	a	-2.45	1980-82	-.50	I(?)
82	5N-26E-23CDA1	198	ALVM	1,3	a	-1.18	1979-82	-1.00	F(?)
83	5N-29E- 1BBB1	149	SKRV	1	a	-4.00	1978-82	-.25	B
84	23CDD1	399	SKRV	2,3	a	-7.55	----	----	No definable trend
85	5N-31E-28CCC1	717	SKRV	1,2	a	-7.90	1978-82	-.80	B,I
86	4N-26E-21ABB1	760	SDMS	3(?)	a	-6.64	1980-82	+.60	C
87	26DCD1	143	ALVM	1,2	a	-2.08	1979-82	-.20	I
88	32CBB1	253	SKRV	1,3	a	-.99	----	----	No definable trend
89	4N-29E- 9DCD1	463	SKRV	3,2(?)	a	-11.92	1979-82	-1.00	I(?)
90	4N-30E- 7ADB1	563	SKRV	3,2(?)	a	-12.58	1979-82	-1.00	I(?)
91	22BDD1	498	SKRV	3,2(?)	a	-9.70	1980-82	-.25	I
92	4N-31E-16ADC1	620	SKRV	3,2	a	-5.46	1980-82	-.50	I
93	3N-26E-22ABA1	1,025	SKRV	3,2(?)	1971-81	-8.77	1980-82	-1.10	I
94	3N-29E-14ADD1	588	SKRV	3	a	-6.13	1980-82	-.40	I(?)
95	19CBB1	657	SKRV	3	a	-4.37	1980-82	+.40	C
96	3N-30E-12CDD1	494	SKRV	3	1976-82	-6.46	1980-82	-.40	F(?),I(?)
97	31AAD1	676	SKRV	3	a	-5.44	1980-82	-.50	F(?),I(?)
98	3N-32E-29DDC1	704	SKRV	2	a	-4.92	1979-82	-.40	I
99	2N-26E-22DDA1	719	SKRV	3	1973-82	+1.13	1980-82	+.70	Increased recharge monitors perched water table
100	22DDA2	1,053	SKRV	3	1972-82	-3.98	1980-82	-.10	F(?),I
101	2N-27E- 2DDC1	812	SKRV	3	a	-4.72	----	----	No definable trend
102	2N-28E-13ADD1	646	SKRV	3	a	-9.68	1980-82	-.25	F(?),I
103	35ADA1	633	SKRV	3	a	-4.21	1978-82	-.20	I(?)
104	1N-29E-30BBD1	704	SKRV	3,2(?)	a	-3.35	1979-82	-.25	I(?)
105	1S-27E-14DCC1	1,041	SKRV	3(?)	a	-9.50	1980-82	-1.00	I(?)
				Camas County					
106	1N-14E-36DAD1	188	SDMS	2	1977-82	-3.68	1977-82	-1.50	I
107	1S-12E-13BAA1	435	SDMS	2	a	-6.08	1980-82	+1.25	C
108	22BBB1	14	SDMS	3,2	1977-82	+5.56	1978-82	+2.00	C
109	1S-13E-16BBB1	13	SDMS	3,2	1978-82	+2.43	1980-82	+.15	C
110	23AAB1	195	SDMS	2	1977-82	-13.50	1978-82	-2.00	I
111	1S-14E- 7DDD1	14	SDMS	3	1977-82	+.27	1978-82	+.20	C
112	8DDB1	320	SDMS	2	a	-16.47	1978-82	-1.50	I
113	24ADA1	12	SMDS	3	1979-82	+4.77	----	----	No definable trend
114	24DAD1	187	BRUN	2	1977-82	-.29	----	----	----do------------
115	1S-14E-28DDC1	212	BRUN	2	1977-82	-1.14	1979-82	-1.00	I
116	1S-15E-16ABA1	316	SDMS	2	1977-82	-3.60	1979-82	-.25	I
117	22AAA1	39	SDMS	2	a	-5.13	1975-82	-.70	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Canyon County					
118	6N- 5W-30BAB1	169	ALVM	1	a	+1.01	----	----	No definable trend
119	5N- 5W-18CAC1	250	IDHO	1	a	+1.00	1979-82	+0.30	A
120	5N- 4W-13BCB1	105	IDHO	1	a	-1.38	1980-82	-.30	B
121	5N- 3W-11BCA1	304	IDHO	2	a	-18.29	----	----	No definable trend
122	5N- 2W-22CAD1	450	IDHO	1,2	a	+3.01	1971-82	+.25	A
123	4N- 5W- 7DCD1	100	IDHO	1,2	a	-.52	----	----	No definable trend
124	4N- 4W- 5DDB1	179	IDHO	1,2	a	-.42	1979-82	Level	
125	4N- 3W-13BAA1	185	IDHO	1	a	-.59	1979-82	+.60	A
126	3N- 4W-11ADA1	91	ALVM	1,2	a	-1.49	1978-82	+.25	A,H
127	3N- 3W- 3BCB2	95	SDMS	1,2	a	-2.65	----	----	No definable trend
128	2N- 3W-22DDC1	580	IDHO	2	a	-38.15	1971-82	-3.25	I
129	2N- 1W- 7BBC1	103	SKRV	1	a	-.44	1979-82	+.25	A
130	1N- 2W- 5ADD1	720	IDHO	2	a	+3.32	1978-81	+1.00	H,E(?)
131	1S- 2W-14CCC2	235	IDHO	1	a	-2.02	1980-82	Level	
				Caribou County					
132	7S-39E- 9DCC1	130	VLCC	2	a	-3.70	----	----	No definable trend
133	10CCD1	68	VLCC	2,3	a	-4.07	1979-82	+3.75	E
134	8S-42E-17CAB1	119	VLCC	3	a	-2.35	----	----	No definable trend
135	9S-39E- 2CBC1	96	VLCC	3,2	1971-81	-4.50	1975-82	-1.50	I(?)
136	9S-40E-13ACB1	303	VLCC	1(?)	a	-1.79	1980-82	-.25	B(?)
137	20BDB1	243	VLCC	2,1(?)	1980-82	-.48	----	----	No definable trend
138	27BCD1	370	VLCC	2,1(?)	1980-82	-.53	----	----	----do------------
139	10S-40E- 5BDD1	208	VLCC	2(?)	1980-82	-1.21	1980-82	-.60	I(?)
140	8BBA1	300	VLCC	2,1(?)	a	-3.01	1980-82	-.25	I(?)
141	35BDD1	90	VLCC	2,1(?)	a	-1.45	1975-82	-.20	I(?)
				Cassia County					
142	9S-25E-23DBA1	174	SKRV	1	a	-8.41	1973-82	-1.25	B
143	9S-26E- 7AAB1	153	SKRV	1	a	-8.88	1972-82	-1.50	B (Lake Walcott?)
144	7AAB2	550	SKRV	1	a	-8.73	1973-82	-1.25	B (Lake Walcott?)
145	7AAB3	805	SKRV	2(?)	a	-17.48	1972-82	-1.75	I(?)
146	7BBC1	88	SKRV	1	a	-11.20	1976-82	-1.75	B
147	10DDD1	128	SKRV	1	1971-79	-4.90	1973-79	-1.25	B
148	11S-22E-32CCC1	635	IDVD	2	1973-82	-15.60	1976-82	-3.50	I
149	11S-23E-34CDC1	412	SKRV	2	a	-15.44	1976-82	-3.00	I
150	11S-25E-32CCC2	500	IDVD	2	1971-80	-7.65	1976-80	-2.50	I
151	11S-27E-12DDA1	376	ALVM	2	a	-15.96	1976-82	-3.00	I
152	29AAA1	247	RAFT	2	a	-23.23	1980-82	-5.00	I
153	12S-19E- 2BBB1	750	IDVD	2	a	-43.30	1976-82	-5.00	I
154	12S-21E- 2DAA1	936	IDVD	2	1972-82	-10.70	1977-82	-5.50	I
155	16DCC1	257	ALVM	2	a	-17.25	----	----	No definable trend
156	25CCC1	1,196	IDVD	2	a	-17.14	1976-82	-7.00	I
157	12S-25E- 6DCC1	102	ALVM	2	a	-3.09	----	----	No definable trend
158	9CCD1	379	----	2	a	+6.90	1978-82	-1.50	I
159	18BBA1	104	ALVM	1	a	-7.21	1980-82	-2.00	B
160	28AAA2	33	ALVM	1,3	1971-79	+.67	1977-79	+4.00	E
161	28AAA3	177	----	1	a	+18.36	----	----	No definable trend
162	12S-26E- 2ACC1	197	RAFT	2	a	-32.69	1976-82	-5.00	I
163	13S-21E-18BBC1	850	LMST	2	a	-21.62	1977-82	-5.00	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Cassia County--Continued					
164	13S-22E-21CCD1	80	ALVM	1	1973-82	-44.69	----	----	No definable trend
165	21CCD2	1,004	ALVM	1	1972-82	-28.71	----	----	----do------------
166	21CCD3	140	ALVM	1	1973-82	-41.00	----	----	----do------------
167	13S-26E- 1CCC1	223	ALVM	2	a	-9.11	----	----	----do------------
168	13S-27E-15CAA1	947	ALVM	2	1972-82	-9.19	1976-82	-2.00	I
169	14S-27E-33CDD1	200	ALVM	2	a	-7.26	1977-82	-1.25	I
170	16S-28E-20CDC1	295	ALVM	2	a	-.13	1980-82	+.15	H(?)
				Clark County					
171	13N-41E- 8BCA1	85	SKRV	3	1971-81	+4.26	----	----	No definable trend
172	10N-35E- 8BBB1	360	SKRV	1	1971-81	-1.89	----	----	----do------------
173	9N-34E-11ADD1	197	SKRV	2	a	-4.26	1978-82	-0.75	I
174	9N-36E-33CBB1	155	SKRV	2	a	-3.12	1978-82	-.30	I
				Custer County					
175	15N-20E- 1ADC1	63	ALVM	3	1971-81	-1.61	1979-81	Level	
176	12N-23E- 2BBC1	128	ALVM	3	a	+2.12	1978-82	Level	
177	9N-21E-14BBC1	254	ALVM	3	a	+.56	1971-82	Level	
				Elmore County					
178	1S- 4E-10DAD1	452	IDHO	3	a	+0.60	1971-82	+0.05	Unknown
179	1S-11E-35CCC1	16	SDMS	3,2	a	-.89	1980-82	-.30	I
180	2S- 5E-26BDB1	429	----	3,2(?)	1977-82	-.94	1980-82	-.50	I(?)
181	36BBB1	357	BRUN	3,2(?)	a	+2.91	1979-82	-.40	I(?)
182	2S- 6E-11DAC1	1,550	BRUN	3	a	+2.98	1976-82	+.30	Unknown
183	2S-11E-11CDD1	226	SDMS	2	1977-82	-8.17	1977-82	-2.00	I
184	3S- 5E- 7BDD1	497	BRUN	2	1976-82	-34.28	1977-82	-6.50	I
185	3S- 6E-13BBA1	150	BRUN	2	1977-82	-4.75	----	----	No definable trend
186	35ABB1	15	ALVM	1,2	a	-.71	1980-82	+.15	A
187	35BCC1	857	BRUN	2	a	-20.08	1977-82	-2.75	I
188	3S- 8E-36CDA1	600	GLFR	2	1971-81	-34.65	----	----	No definable trend
189	4S- 3E-23CDD1	600	BRUN	2	1976-82	-6.62	1978-82	-1.00	I
190	29DDD1	100	----	1	a	+.63	1979-82	Level	
191	4S- 5E-24AAB1	553	BRUN	2	1977-82	-7.56	1977-82	-1.75	I
192	25BBC1	530	BRUN	2	a	-20.58	1971-82	-2.00	I
193	4S- 7E- 9DCC1	862	BRUN	2	a	-.32	1979-82	+.90	H(?)
194	4S-10E-30BBA1	1,481	GLFR	2	a	-8.74	1978-82	-.75	I
195	5S- 4E- 5CAA1	470	BRUN	2	1971-81	-24.15	1977-81	-2.00	I
196	5S- 6E-15BCD1	570	GLFR	2	1976-80	-1.72	1977-80	-.50	I
197	5S- 8E-36CCC1	90	MEON	1	a	-3.11	1980-82	Level	
198	5S-10E-28CAB1	1,100	GLFR	----	1976-82	-3.64	----	----	No definable trend
199	6S-10E-30DCB1	437	BRUN	2	a	-7.91	1979-82	-3.00	I
200	6S-11E- 6BBA1	445	GLFR	2	a	-13.83	1979-82	-1.75	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Franklin County					
201	14S-38E-15CDC1	200	ALVM	2	a	-2.57	----	----	No definable trend
202	15S-39E-23BBB1	11	ALVM	1,3	a	-.38	1980-82	+0.20	E
203	16S-39E-18CDA1	462	ALVM	2	a	+3.47	----	----	No definable trend
204	16S-40E-29CCB1	82	ALVM	1	a	-.95	----	----	----do------------
				Fremont County					
205	15N-43E-13BCA1	155	ALVM	1	1975-82	-1.88	1980-82	+1.00	A
206	14N-43E- 2AAC1	125	LVCK	3,1(?)	a	-1.28	1977-82	Level	
207	13N-43E-15ADC1	58	LVCK	3	1975-82	-.39	----	----	No definable trend
208	9N-42E-34DDA1	110	SKRV	1,2	a	-.26	1979-82	+.50	A,H
209	9N-44E-21AAD1	132	HKBR	1	1976-82	-19.56	----	----	No definable trend
210	7N-40E- 5DBC1	39	ALVM	1	a	+.63	1980-82	+.80	A
211	7N-42E- 6DDA1	910	VLCC	2,1(?)	a	+1.96	1978-82	Level	
212	10DCD1	650	VLCC	3	1976-81	+7.63	----	----	No definable trend
213	7N-44E- 2AAA1	214	----	3	a	-8.90	1980-82	-4.00	Unknown
				Gem County					
214	7N- 3W-34ABD1	23	ALVM	1	a	+0.44	1977-82	+0.20	A
215	34ABD2	54	IDHO	1	a	+.60	1977-82	+.20	A
216	34ABD3	85	IDHO	1	a	+.56	1978-82	+.10	A
217	7N- 2W-29BBA2	291	IDHO	1	a	+.07	1979-82	+.25	A
218	35ABB1	100	ALVM	1	a	+.39	1979-82	+.60	A
219	6N- 2W-14BCA1	21	ALVM	1,2(?)	a	-1.72	1977-82	+.30	A
220	14BCA2	84	IDHO	1	a	+.82	1977-82	+.30	A
221	6N- 1W-18DAA2	31	ALVM	1	a	+.34	1979-82	+.50	A
				Gooding County					
222	5S-15E-35DBD2	165	SKRV	1	1973-82	-9.07	1980-82	+0.50	A
223	8S-14E-16CBB1	53	SKRV	1	a	-.55	1978-82	Level	
224	8S-16E-18AAA1	197	SKRV	1	a	-4.17	1980-82	-1.00	B
225	9S-14E- 3BAA1	94	SKRV	1	a	-.74	1980-82	Level	
226	9S-16E- 7DCA1	128	SKRV	1	a	-.75	1978-82	+.20	A
				Jefferson County					
227	8N-34E-17CCC3	440	SKRV	2	a	-4.71	1976-82	-1.00	I
228	17CCC4	545	SKRV	2	a	-6.29	1976-82	-1.00	I
229	17CCC5	888	SKRV	2	a	-2.81	1976-82	-.75	I
230	17CCC6	1,007	SKRV	2	a	-2.65	1976-82	-.75	I
231	17CCC7	48	SKRV	2	a	-4.98	1976-82	-1.00	A
232	7N-33E-35BCC1	54	ALVM	1	a	+1.16	1977-82	+.30	A
233	7N-34E- 4CDC1	57	SKRV	2	a	-4.44	1976-82	-1.60	I
234	7N-35E-20CBD1	58	SKRV	2	a	-7.93	1976-82	-1.30	I
235	7N-36E-22ABD4	25	SKRV	2	a	-2.33	1978-82	-.35	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Jefferson County--Continued					
236	7N-37E-28CCD1	135	SKRV	2	a	-2.49	1978-82	-0.25	I
237	6N-32E-11ABA1	267	SKRV	2	a	-2.39	1978-82	-.70	I
238	26CDB1	322	SKRV	2	a	-2.73	1978-82	-.60	I
239	6N-33E-26DDB1	312	SKRV	2	a	-2.39	1980-82	-.50	I
240	6N-35E-21AAB1	276	SKRV	2	a	+.56	1980-82	+.50	E,H(?)
241	27DDA1	260	SKRV	2	a	-4.51	1978-82	-.50	I
242	6N-36E-27BAA1	228	SKRV	2	a	-2.27	1978-82	-.25	I
243	6N-38E-30BAD2	308	SKRV	1,2(?)	a	-1.73	1978-82	-.10	B
244	30BAD3	544	SKRV	1,2(?)	a	-2.39	1978-82	-.20	B,I(?)
245	30BAD4	638	SKRV	------	----	----	----	----	Water levels indicate piezometer is leaking; record is meaningless
246	5N-32E-36ADD1	406	SKRV	2	a	-3.97	1978-82	-.60	I
247	5N-33E-13BDC1	405	SKRV	2	a	-4.25	1978-82	-.40	I
248	13BDC2	493	SKRV	2	a	-4.15	1978-82	-.40	I
249	13BDC3	1,007	SKRV	2	a	-2.87	1978-82	-.40	I
250	5N-34E- 9BDA1	553	SKRV	2	a	-4.31	1980-82	-.40	I
251	29DAA1	426	SKRV	------	----	----	----	----	No definable trend; insufficient record
252	5N-36E- 2BDA1	405	SKRV	2	a	-5.93	1978-82	-.50	I
253	2BDA2	923	SKRV	2	a	-9.59	1978-82	-.60	I
254	2BDA3	995	SKRV	------	----	----	----	----	Water levels indicate piezometer is leaking; record is meaningless
255	21DAC1	300	SKRV	2	a	-4.97	1980-82	-.60	I
256	4N-35E-14AAA1	1,000	SKRV	2	a	-4.78	1978-82	-.40	I
257	4N-38E-12BBB1	420	SKRV	1	a	+1.09	1977-82	+.50	A
258	4N-38E-12BBB2	480	SKRV	1	a	-1.91	1979-82	Level	
259	12BBB3	550	SKRV	1	a	-1.83	1979-82	Level	
260	12BBB4	760	SKRV	1	a	-3.51	1979-82	+.25	A
261	12BBB5	918	SKRV	1	a	-1.15	1979-82	-.50	B
262	4N-39E-16DAD1	78	ALVM	1	a	+1.16	1978-82	+1.00	A
263	26DAA1	108	ALVM	1	a	-3.83	1979-82	-1.00	B
				Jerome County					
264	7S-17E- 6ACA1	345	SKRV	1	a	-4.69	1979-82	-0.75	B
265	8S-19E- 5DAB1	329	SKRV	1	1971-81	-5.76	1978-82	-1.00	B
266	9S-18E-35CCA1	176	SKRV	1	1971-81	-.66	1978-82	-.25	B
267	9S-19E-25BBC1	208	SKRV	1	a	-7.89	1978-82	-1.25	B
268	10S-20E-27BCC1	735	SKRV	2	a	-6.23	1978-82	-1.00	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Kootenai County					
269	53N- 4W-24BBA1	485	ALVM	3,2(?)	a	-1.03	----	----	No definable trend
270	28CAB1	449	ALVM	3,2(?)	1972-82	-1.31	----	----	----do------------
271	53N- 2W- 9AAC1	351	OTSH	3	a	+2.69	----	----	----do------------
272	51N- 5W-33BBA1	174	OTSH	3,2(?)	a	+2.17	----	----	----do------------
				Latah County					
273	39N- 5W- 7DDC1	240	CBRV	2	a	+6.01	----	----	No definable trend
				Lemhi County					
274	21N-22E-15BAC1	37	ALVM	3	1974-82	+0.47	1978-82	Level	
275	31DAA1	33	ALVM	3	1974-82	-.68	1978-82	Level	
276	19N-24E- 8CDD1	59	ALVM	3	1974-82	-.03	1979-82	+0.20	E
277	18N-24E-20DDA1	40	ALVM	3	1976-82	-1.69	1977-82	Level	
278	14N-22E-35BBD1	249	ALVM	3	1972-82	-4.58	1980-82	+5.50	C
				Lincoln County					
279	3S-20E- 2DDA1	569	SKRV	1	1974-82	+1.15	1980-82	+2.25	A
280	5S-17E-26ACA1	254	SKRV	1	a	-13.31	1979-82	-1.50	B
281	5S-23E-17CAA1	333	SKRV	2	a	-7.87	1978-82	-1.40	I
				Madison County					
282	7N-38E-23DBA1	236	SKRV	1	a	-2.43	1978-82	-0.25	B
283	23DBA2	152	ALVM	1	a	-1.16	1978-82	Level	
284	6N-39E-10BBB1	260	SKRV	1	a	-2.38	1978-82	-.20	B
285	10BBB2	317	SKRV	1	a	-2.47	1978-82	-.20	B
286	10BBB3	545	SKRV	1	a	-2.42	1978-82	-.20	B
287	10BBB4	637	HKBR	1	a	-2.59	1978-82	-.20	B
288	30ADC1	295	SKRV	1	a	-1.49	1980-82	+.15	A
289	30ADC2	620	SKRV	1	a	-2.21	1979-82	-.20	B
290	30ADC3	700	SKRV	1	a	-1.91	1979-82	-.30	B
291	6N-40E- 9BBB2	25	ALVM	1	1978-82	+4.36	1980-82	+1.25	A
292	6N-41E- 2BDC1	350	SKRV	2	a	+4.14	----	----	No definable trend
293	5N-39E- 8DAD1	28	ALVM	1	a	-.29	1979-82	+.10	A
294	5N-40E- 1CCD1	509	SKRV	2	a	+7.11	1980-82	Level	
				Minidoka County					
295	4S-24E- 6BBC1	444	SKRV	2	a	-7.99	1978-82	-1.50	I
296	5S-25E-22DAD1	581	SKRV	2	1972-82	-8.58	1979-82	-1.40	I
297	7S-24E- 2ADD1	252	SKRV	2	a	-7.64	1980-82	-1.20	I
298	8S-23E-27BDC1	260	SKRV	2	a	-5.88	1980-82	-1.00	I
299	8S-24E-31DAC1	194	SKRV	2	a	-6.97	1980-82	-1.00	I

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Minidoka County--Continued					
300	8S-25E-16DAC1	230	SKRV	2	a	-7.59	1980-82	-1.25	I
301	36DAA1	207	SKRV	1	a	-6.85	1978-82	-1.25	B
302	9S-22E-16CDB1	495	SKRV	2	a	-7.83	1977-82	-1.60	I
303	33ADA1	253	SKRV	2	1971-81	-3.81	1974-81	-.75	I
				Nez Perce County					
304	35N- 5W-16DAC1	383	CBRV	1(?)	a	+0.78	----	----	No definable trend
				Oneida County					
305	13S-33E- 4ADD1	146	SLLK	3(?)	a	+7.94	1980-82	-1.75	Unknown
306	13S-35E-36CCD1	131	SDMS	3(?)	a	+2.41	1980-82	+.10	C
307	14S-35E-13DBA1	289	TRRCO	2	a	+17.61	1980-82	+.60	Unknown; possibly H
308	15S-32E- 9AAA2	270	SDMS	2	a	-3.35	1978-82	-.30	I(?)
309	15S-35E- 1DAA1	275	TRRCO	2	a	+2.79	1978-82	-.50	I
310	22AAB1	229	TRRCO	2(?)	a	+6.10	1978-82	-.50	I(?)
311	15S-36E-22ABA1	100	TRRCO	2	a	+.78	1979-82	-.50	I
312	16S-30E- 9ABB2	485	SLLK	----	a	+8.25	----	----	No definable trend
313	16S-32E-27DAB1	230	VLFL	2	1971-81	-1.02	----	----	----do------------
				Owyhee County					
314	3N- 4W-30AAB1	200	IDHO	2	a	-1.32	1977-82	Level	
315	2N- 4W- 7DBB1	1,100	----	2	a	+8.19	----	----	No definable trend
316	1N- 3W-20CCC1	155	IDHO	2	a	+4.65	1979-82	+1.50	H(?)
317	1S- 3W- 1BBC1	1,800	----	2	a	+.45	1978-82	-.10	I
318	3S- 1E-35DAC1	300	IDHO	1(?)	a	+13.57	1977-82	+.75	A
319	4S- 1E-30BBB1	320	IDHO	2	a	-6.02	1979-82	-1.00	I
320	5S- 1E-20DAD1	666	BRUN	2	a	-6.40	1977-82	-3.00	I
321	5S- 2E- 5BCD1	2,009	IDHO	2	a	+3.90	----	----	No definable trend
322	6S- 3E-14BCB1	1,342	IDHO	2	a	-17.61	1979-82	-2.00	I
323	6S- 4E-14ABC1	1,905	IDVD	2	1971-81	-25.34	----	----	No definable trend
324	6S- 5E-24BCA1	1,095	BRUN	2	a	+25.12	1979-82	-2.00	Net water-level change and trend questionable because of difficulties measuring flowing well
325	33DBB1	142	----	2	a	-8.31	1976-82	-.50	I
326	7S- 6E- 9BAD2	960	BRUN	2	a	-7.18	1980-82	-3.50	I
327	8S-11E-33CBA1	290	IDHO	1	a	+3.49	1977-82	+.20	A
328	9S-12E-29ACD1	530	IDVD	2	a	-33.69	1971-82	-3.00	I
				Payette County					
329	8N- 5W- 3BAD1	26	ALVM	1	a	+1.83	1977-82	+0.30	A
330	8N- 4W-33ACA1	29	ALVM	1	a	+1.97	1973-82	+.10	A
331	7N- 5W- 2BCC1	55	ALVM	1	a	+.11	----	----	No definable trend

Table 1.--Selected hydrologic data for current statewide observation wells--Continued

Reference number (plate 1)	Well location number	Well depth (feet below land surface)	Aquifer rock type or geologic unit	Major cause for water-level fluctuations	Net water-level change (feet)		Water-level trend (feet per year)		Probable cause of trend or remarks
				Power County					
332	5S-28E-26BBD1	761	SKRV	2	a	-3.93	1979-82	-0.50	I(?)
333	5S-33E-35CCD1	60	ALVM	1,2	a	-1.10	1978-82	Level	
334	6S-32E-27ADC1	63	ALVM	2	a	-.19	1979-82	-.10	I
335	7S-30E-24DDC1	215	SKRV	2	a	-3.34	1979-82	-.50	I(?)
336	28BBC1	288	SKRV	2	a	-1.41	1979-82	-.40	I(?)
337	8S-29E-34CBC1	665	RAFT	1,2(?)	1972-82	-10.42	1979-82	+.20	A,H
338	34CBC2	704	TSDMS	1,2(?)	1972-82	-1.58	1978-82	-.80	B,G(?)
339	34CBC3	861	SRLG	------	----	----	----	----	Water levels indicate piezometer is leaking; record is meaningless
340	8S-30E-23DCC1	273	NELY	1	a	+1.57	1980-82	-.70	B,G
341	8S-31E- 4CBB1	277	SNBM	2	a	-2.88	----	----	No definable trend
342	9S-28E-18BAD1	150	RAFT	1	1972-82	-1.76	1980-82	-.10	B
343	18BAD2	505	RAFT	2(?)	1972-82	-14.06	1978-82	-1.25	I(?)
344	18BAD3	1,014	SRLG	------	----	----	----	----	Water levels indicate piezometer is leaking; record is meaningless
				Teton County					
345	6N-44E-22DDC1	258	ALVM	3	a	+9.60	----	----	No definable trend
346	4N-45E-13ADA1	304	ALVM	3	a	-2.57	1979-82	-2.00	Unknown
				Twin Falls County					
347	8S-12E-24CCC1	500	BNBR	2	a	+14.33	1979-82	+2.50	H(?)
348	8S-13E-23CCD1	100	BNBR	1	a	-1.48	----	----	No definable trend
349	9S-13E-20CCD1	790	IDVD	2	a	-.21	1978-82	+1.75	H(?)
350	10S-12E-11DBD1	688	IDVD	2	a	-37.05	1978-82	-1.50	I
351	10S-18E-20DDD1	1,200	SKRV	1	a	-3.21	1980-81	+.25	A
352	11S-15E- 7ACB1	347	BNBR	1	a	+2.75	1978-82	+.50	A
353	11S-17E-25DDD2	352	SKRV	1	a	+2.51	1980-82	+1.75	A
354	11S-19E-17AAB1	860	SKRV	2	a	-6.46	1978-82	-1.50	I
355	31ADD1	350	ALVM	2	a	-19.89	1977-82	-4.50	I
356	11S-20E-33DAD1	680	IDVD	2	1971-81	-21.01	1976-82	-4.50	I
357	14S-15E-28BAD2	455	IDVD	2	a	-9.37	1978-82	-2.00	I
				Valley County					
358	18N- 3E-36BCD1	177	ALVM	1	a	+3.51	1980-82	+0.80	A
359	16N- 3E-14AAB1	110	ALVM	3	a	+.28	----	----	No definable trend
360	13N- 4E-16BAB1	84	ALVM	2	a	-2.02	1979-82	+.25	C
				Washington County					
361	14N- 2W- 6DCD1	406	SKRV	2	1975-80	-4.14	1977-80	-1.10	I
362	10BCA1	129	SDMS	2	1975-82	-.14	----	----	No definable trend
363	13N- 4W-12CDC1	170	IDHO	2	a	+13.45	1980-82	+6.00	H
364	13N- 1W-32ACD1	142	----	2	1975-82	-12.17	1979-82	-1.50	I
365	12N- 4W-31DBB1	95	IDHO	1	a	+1.98	1979-82	+.80	A
366	11N- 6W-25CAC1	39	SDMS	1	1975-82	+4.08	----	----	No definable trend