

COOPERATIVE AGREEMENT WITH OBSERVER

Station TAYLOR RANCH County Valley State Idaho

Effective date of agreement 8/9/83

I agree to give reasonable care and protection to the meteorological instruments furnished by the National Weather Service, and to furnish free of charge the following services, space, facilities, etc., in accordance with National Weather Service instructions, until this agreement is terminated by written notice by either party to the other: During the term of this agreement I will permit National Weather Service officials and/or alternate observers free ingress and egress to the equipment for purposes of taking observations, inspection, or maintenance but assume no liability for injuries which might occur to such persons while on the premise.

Date: Aug 9, 1983 *Holly A. Okenson*
(Signature of substation observer)

~~XXXXXXXXXX~~ University of Idaho (Taylor Ranch Research)
(Type one given name, initial or initials, and surname of observer, or name of organization)

Occupation _____
(Other than for the National Weather Service)

Service designation(s) Climatological, Temp. & Precip. Reporting S&E
(Aviation, climatological, rainfall (river), recording FC-1, evaporation, etc.)

Authorized by W/WR42 Memo 2/28/83
(For station establishment or change in service refer to letter or other authorization; for change of observers leave blank)

Equipment is located at Taylor Ranch
(Street address, building name, highway number, etc.)

If this is not a new station, was equipment relocated? _____
(Yes or no)

Services of _____ terminated _____
(Give name of former observer, displayman, etc., if one is being replaced at this time) (Date)

Remarks _____

Supervising station WSFO Boise, Idaho Prepared by Ingve H. Olson Jr.
WSO (etc.: City and State)

Approved *Ingve H. Olson Jr.* Title Cooperative Program Manager
(Signature)

Original to RSMB, copies to Supervising Office (if other than RSMB), the Substation Inspector and the observer.

(Follow instructions on other side)

ACTIONS REQUIRING THE USE OF WS FORM B-30

1. The original agreement with a cooperative storm warning displayman, flood warning distributor, observer, etc.
2. Any material change in the terms of agreement with cooperative personnel already rendering service to the Weather Service, such as adding river observations at a climatological station, etc., or the termination of the service.
3. Space agreement for installation of instrumental equipment when the property upon which it is proposed to install instrumental equipment is controlled by an individual or organization other than the individual or organization responsible for the personal service.
4. The original agreement with a company or organization to provide observations to be taken by its personnel at one or more locations.

INSTRUCTIONS FOR PREPARATION OF THE FORM

Sufficient copies should be prepared to provide one for the observer, the RSMB, the direct supervising office (if other than RSMB), and the substation inspector. The forms may be prepared by any Weather Service employee who is authorized to recruit substation personnel but must be approved by a person authorized to approve appointments as outlined in Weather Service Operations Manual B-17.

The agreement, in order to be effective, must indicate what personal services and what space or facilities, if any, the observer will furnish. It should be stated in general terms, however, so as to avoid the necessity of preparing new forms frequently because of insignificant changes in procedure or reporting instructions. One or more of the items listed below will cover the activities at most substations, but others might be included also. For example, "Communication facilities for transmission of reports" might be furnished by an airline operating company or a Government agency.

Suitable space for exposure of instruments.

Weather (or river) observations and reports.

Distribution of flood warnings.

Display and/or distribution of storm warnings.

Weather reports to local newspaper (or radio station).

Distribution of weather (or river) reports and/or forecasts. *W*

At a second order station or a substation where an airline company or other organization agrees to provide personnel for observational duties on company time, the Weather Service's agreement is, in effect, with the organization and not with the individual. Therefore, one agreement should be executed with a responsible officer of the organization, covering all services to be rendered for the Weather Service at that second order station or substation. The same procedure should be followed where a Government agency agrees to render a cooperative service, except in the case of Federal Aviation Agency personnel where this form is not required.

Two separate appointments and/or agreements for services of one person must not be in effect at the same time; therefore, when both a paid and a cooperative service are to be rendered, the action should be effected on NOAA Form 36-14.

The name and last date of service of the former observer, displayman, etc., if any, should be indicated in the spaces provided.

When the form is submitted to cover the termination of an agreement, the agreement statement starting with "I agree to give reasonable etc." will be stricken out and the following will be inserted above the line provided for the observer's signature "to terminate the agreement with _____ dated _____." A brief explanation of the reason for the termination will be given in the "remarks". When the form is submitted to cover the termination of an agreement, it is desirable but not necessary to obtain the signature of the employee. If the reason for the termination is resignation and a letter or other written evidence of the resignation has been received, it should be attached. If the resignation was oral, a note to that effect should be made in the remarks.

STATION NAME	STATION NUMBER 10 9000 4	DATE
ADDRESS	OBSERVER'S SIGNATURE	

- PLEASE SEND THE SUPPLIES LISTED BELOW:
- THIS STATION IS HAVING THE FOLLOWING DIFFICULTIES:

**For Faster Service
Please Use This Card**

WB FORM B-27
(4-70)

(FORMERLY WB 530-14)

SUBSTATION SUPPLY REQUEST

U.S. DEPARTMENT OF COMMERCE

NOAA

NATIONAL WEATHER SERVICE

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-210



OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

Weather Service Forecast Office
Attn: Substation Program
3905 Vista Avenue
Boise, ID 83705

STATION NAME	STATION NUMBER 10 9000 4	DATE
ADDRESS		OBSERVER'S SIGNATURE

- PLEASE SEND THE SUPPLIES LISTED BELOW:
- THIS STATION IS HAVING THE FOLLOWING DIFFICULTIES:

**For Faster Service
Please Use This Card**

WB FORM B-27

(4-70)

(FORMERLY WB 530-14)

SUBSTATION SUPPLY REQUEST

U.S. DEPARTMENT OF COMMERCE

NOAA

NATIONAL WEATHER SERVICE

**U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

**POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM-210**



**OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300**

Weather Service Forecast Office
Attn: Substation Program
3905 Vista Avenue
Boise, ID 83705

STATION NAME	STATION NUMBER 10-9000-4	DATE
ADDRESS		OBSERVER'S SIGNATURE
<input type="checkbox"/> PLEASE SEND THE SUPPLIES LISTED BELOW: <input type="checkbox"/> THIS STATION IS HAVING THE FOLLOWING DIFFICULTIES:		

SUBSTATION SUPPLY REQUEST

U. S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL WEATHER SERVICE

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.
NATIONAL WEATHER SERVICE

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300.00

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE

COM-210



National Oceanic and Atmospheric Administration
National Weather Service Forecast Office
3905 Vista Avenue
Boise, Idaho 83705

COOPERATIVE STATION SUPPLY REQUEST

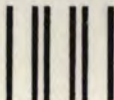
STATION NAME	STATE	STATION NUMBER	DATE
ADDRESS			OBSERVER'S SIGNATURE

10 9000 4

- PLEASE SEND THE SUPPLIES LISTED BELOW:
- THIS STATION IS HAVING THE FOLLOWING DIFFICULTIES:

U.S. Department Of Commerce
NOAA - National Weather Service
Western Region Co-op Program Mgt.
P.O. Box 11188, Federal Building
Salt Lake City, Utah 84147

Official Business
Penalty For Private Use, \$300



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS

PERMIT NO 1100

ROCKVILLE, MD

POSTAGE WILL BE PAID BY
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

**NATIONAL OCEANIC & ATMOSPHERIC ADM.
NATIONAL WEATHER SERVICE FORECAST OFFICE
3905 VISTA AVE. ATTN: CPM
BOISE, IDAHO 83705**



STATION NAME	STATION NUMBER 10-9000-4	DATE
		OBSERVER'S SIGNATURE

PLEASE SEND THE SUPPLIES LISTED BELOW:

THIS STATION IS HAVING THE FOLLOWING DIFFICULTIES:

WS FORM B-27
(6-72)

☆U.S. GPO: 1977-765-005/1154 Region 6

U.S. DEPARTMENT OF COMMERCE
NOAA

SUBSTATION SUPPLY REQUEST NATIONAL WEATHER SERVICE

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION
NATIONAL WEATHER SERVICE

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM - 210



National Oceanic and Atmospheric Administration
National Weather Service Forecast Office
3905 Vista Avenue
Boise, Idaho 83705



DARRELL D. HUSTON

Agricultural Meteorologist

NATIONAL WEATHER SERVICE
FORECAST OFFICE

Boise Interagency Fire Center
3905 Vista Ave.
Boise, Idaho 83705-0126

Office: (208) 334-9860
FTS: 554-9860

Here is another Max, center the
70 degree line in the holder and
tighten the thumb screw with a
pair of pliers. Return broken Max
in this box, return label enclosed.

Thanks
Dly

Die Olson -
Set up weather
Station, Our
contact person.

208-354-9860

MET-IN-CHARGE

AL DREUMONT

UNITED STATES DEPARTMENT OF COMMERCE — WEATHER BUREAU

INSPECTION AND CARE OF ALCOHOL-FILLED MINIMUM THERMOMETERS
(Abridged from U.S. Weather Bureau Circular B, 1952)

Inspection.—Inspect new thermometers upon receipt. Inspect all thermometers when they are placed in use and as frequently as necessary to insure proper functioning.

- (1) Inspect for small bubbles in alcohol column, especially for bubbles around the index.
- (2) Inspect the bore (especially the upper end) for segments of alcohol that have become detached from the principal column.

Defective Thermometers.—None of the following methods should be continued so long or so forcefully as to risk breakage (not over 15 to 20 minutes). When these methods are unsuccessful, reorder and replace with a serviceable thermometer. After reuniting a defective alcohol column, suspend the thermometer vertically, bulb end down, for several hours to permit drainage of small drops clinging to the sides of the bore.

Methods of Reuniting Alcohol Columns.—

- (1) Hold the thermometer securely below the middle (bulb end down when hand is raised above the elbow). Strike narrow edge of metal back opposite break in column sharply against fleshy portion of palm of hand (see Fig. 1). Repeat as necessary. While holding thermometer, do not apply pressure against glass stem, such as with fingers or other parts of hand.



Fig. 1



Fig. 2

- (2) Hold thermometer overhead (bulb end upward) securely by edge of metal back and a little above the mid-point toward the high-temperature end. Avoid pressure on stem. Quickly swing thermometer downward through an arc of 3 or 4 feet (see Fig. 2), stopping motion rapidly as thermometer approaches the vertical. Repeat as necessary.
- (3) Pass a strong cord through hole in top of metal back. Tie ends securely. Firmly grasp the cord 6 to 8 inches from thermometer and whirl it rapidly. Inspect the cord as frequently as necessary to insure that the metal back does not cut the cord as the thermometer is whirled.

PACKING SLIP

THE MAXIMUM THERMOMETER

Mercurial maximum thermometers have a constriction in the bore just above the bulb, like the familiar "fever" thermometer. As the ambient air becomes warmer, the mercury expands and is forced through the constriction into the graduated tube above. When the temperature falls, the mercury contracts, but the restriction above the bulb prevents the mercury from flowing back into the bulb without some force. Accordingly, the small column of mercury in the graduated portion remains at the highest point reached until forcibly disturbed.

Because of the size of this restriction and the force exerted by the surface tension of mercury, there is normally a complete separation of the mercury in the bulb and the mercury in the graduated tube (except under conditions of expansion under heat). This "break" in the mercury column at the restriction is not a defect; rather it is the normal result of an essential feature of mercurial maximum thermometers. However, if a separation does develop within the mercury column above the constriction, which cannot be removed by tilting and whirling, then the thermometer is faulty and must be replaced. But the gap between the portions of mercury at the constricted section of the bore is normal and should cause no concern.

If the maximum thermometer is tilted with the bulb end higher, the column of mercury will flow toward the top of the thermometer, making a very large gap between the bulb and the upper segment of mercury. This emphasizes the need to read the maximum thermometer only after it has been gently lowered to a vertical position so that the top of the upper segment is definitely opposite the proper highest degree reading it reached during the period of exposure. If this is not done, a false high reading can be obtained. Perhaps vibration from wind may have joggled the mercury segment higher than the true maximum while in its horizontal position. To restore it to the proper point, the thermometer must be turned slowly to the vertical, and then the reading can be made confidently.

On a very hot day when the mercury rises high in the tube, it is possible, on whirling to reset the thermometer, to break the segment in the middle. If the thermometer happens to be mounted about half way along its length, centrifugal force of whirling sends half the mercury down toward the bulb and the other half to the top of the thermometer. To overcome this, mount the thermometer closer to the upper end.

In some maximum thermometers, the constriction above the bulb is too large and allows mercury to run back into the bulb as the temperature drops. These are "retreaters" and worthless. You can test your thermometer for this by holding it in a vertical position and warming the bulb with your fingers. If the mercury runs back into the bulb when you let the bulb cool, rather than staying at the highest point reached, it should be replaced. Some thermometers have too small a constriction and are hard to reset. If you have one of these, it should likewise be replaced.

With care, separated mercury columns may be reunited with centrifugal force. Methods (2) and (3) for reuniting alcohol columns are applicable.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE, FORECAST OFFICE
3905 Vista Avenue
Boise, Idaho 83705

November 16, 1982

Mr. Jim Akenson, Manager
Taylor Ranch, Big Creek
Cascade, ID 83611

Dear Mr. Akenson,

We were very happy to hear from you requesting that the Taylor Ranch cooperative station be re-established. Taylor Ranch is on a grid point for our national climatic program, and re-establishing the station would fill that void.

We have submitted an installation and budget adjustment request to enable us to proceed with the project. Ingve Olson, Cooperative Program Manager, will be in touch with you as soon as approval is granted. We should know within two to three weeks.

Thank you again for offering to work with us in re-establishing the Taylor Ranch cooperative station.

Sincerely,

A. A. Dreumont
Meteorologist in Charge/Area Manager



ADDRESS

Nov. 4, 1982

Dear Sirs:

We are very interested in re-establishing a weather station here at the Taylor Ranch. We are planning to conduct a variety of research projects out of Taylor Ranch in the near future. Weather information is vital baseline data for all these projects.

My wife and I were hired two months ago as full time managers of this research facility. We will be stationed at the ranch throughout the year so we could continuously record weather data.

We are anxious to hear from you regarding this matter. You are welcome to visit the facility anytime.

Sincerely,

Jim A., Manager
T.R.

Cas. ID.

Response sent Nov 16 by AA Dreumont, Meteorologist
in Charge/Area Manager



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE FORECAST OFFICE
3905 Vista Ave.
Boise, Idaho 83705

December 10, 1982

Mr. Jim Akenson, Manager
Taylor Ranch, Big Creek
Cascade, Idaho 83611

Dear Mr. Akenson,

I need some information before I can submit a request to re-establish the station at Taylor Ranch. Since our budget was already set up in Oct. I have to establish what the cost to the Government will be to set it up and cut any corners I can.

When the station was first established, its my understanding that we would supply the equipment and maintain it, and in return, the observer would radio in the temp. and precip. readings each morning to Idaho Tele-Radio in Boise at no cost to the Govt. You may prefer radioing the information through someone else, which would be fine with us. If we are still in agreement on the daily call-ins I can submit the request.

To get the equipment in there I'll of course have to charter a plane, which will cost about \$120 to \$150. I don't know what size plane the University uses or how often it flies into the ranch, but if its big enough to take in the shelter and smaller items it would sure cut down the cost of getting the station going again.

As soon as I receive your reply I'll be able to procede with the request form. Thank you for your patience in this matter and I'm looking forward to meeting you.

Sincerely,

Ingve H. Olson Jr.
Cooperative Program Manager



3100. Big Creek near Big Creek, Idaho

Location.--Lat 45°07', long 114°55', in NE 1/4 sec. 36, T. 21 N., R. 12 E., on left bank three-quarters of a mile downstream from Cabin Creek, 1 1/2 miles southeast of Wallace Ranch, and 19 miles east of Big Creek Post Office.

Drainage area.--470 sq mi, approximately.

Records available.--September 1944 to October 1958.

Gage.--Water-stage recorder. Altitude of gage is 3,950 ft (from river-profile map). Prior to Oct. 22, 1948, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--14 years (1944-58), 509 cfs (368,500 acre-ft per year).

Extremes.--1944-58: Maximum discharge, 5,800 cfs June 3, 1948 (gage height, 7.12 ft. from floodmark, former site and datum), from rating curve extended above 5,000 cfs by logarithmic plotting; minimum, 48 cfs Dec. 14, 1955 (discharge measurement), but may have been less during period of ice effect.

Remarks.--No regulation. Small diversions above station for irrigation.

Monthly and yearly mean discharge, in cubic feet per second

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	276	269	197	159	193	170	824	1,916	1,682	781	283	193	580
1952	212	170	150	140	137	136	673	1,771	1,830	622	248	170	522
1953	143	124	123	138	135	152	438	1,003	2,304	1,051	293	180	507
1954	155	146	115	112	124	139	479	1,766	1,545	862	293	193	498
1955	165	146	122	119	109	110	164	925	2,073	826	257	185	434
1956	167	174	235	166	112	201	866	2,531	2,345	675	264	203	665
1957	166	173	151	126	143	158	295	2,288	2,060	545	237	188	548
1958	176	152	138	132	143	141	243	2,157	1,463	440	232	182	469
1959	161	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Monthly and yearly discharge, in acre-feet

Water year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	The year
1951	16,950	16,010	12,140	9,790	10,720	10,470	49,050	17,800	100,100	48,050	17,420	11,460	420,000
1952	13,040	10,130	9,200	8,610	7,880	8,350	40,030	108,900	108,900	36,230	15,250	10,120	378,600
1953	8,790	7,370	7,560	8,510	7,510	9,370	26,040	61,650	17,100	64,630	18,020	10,680	367,200
1954	9,540	8,680	7,060	6,890	6,910	6,520	26,480	109,800	91,930	53,020	18,040	11,500	360,400
1955	10,150	8,710	7,510	7,290	6,060	6,740	9,760	56,910	123,400	50,770	15,790	11,000	314,100
1956	10,280	10,380	14,470	10,190	6,460	12,340	52,710	155,600	139,500	41,460	17,490	12,050	483,000
1957	11,440	10,310	8,250	7,760	7,930	9,700	17,540	140,700	122,600	35,490	14,550	11,190	396,500
1958	10,830	9,070	8,480	8,130	7,960	8,690	14,440	132,600	87,070	27,070	14,250	10,810	339,400
1959	9,925	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Yearly discharge, in cubic feet per second

Year	WSP	Water year ending Sept. 30						Calendar year					
		Momentary maximum		Minimum day	Mean	Per square mile	Runoff		Runoff				
		Discharge	Date				Inches	Acre-feet	Mean	Inches	Acre-feet		
1950	-	-	-	-	-	-	-	-	-	-	-	-	-
1951	1217	3,600	May 28, 1951	100	580	1.23	16.76	420,000	562	16.18	405,600	-	-
1952	1247	3,490	June 7, 1952	90	522	1.11	15.08	378,600	510	14.74	370,000	-	-
1953	1287	4,060	June 13, 1953	90	507	1.08	14.65	367,200	509	14.72	368,800	-	-
1954	1347	4,070	May 21, 1954	80	498	1.06	14.39	360,400	499	14.43	361,500	-	-
1955	1397	3,580	June 13, 1955	80	434	.923	12.53	314,100	446	12.88	322,800	-	-
1956	1447	5,220	May 24, 1956	65	665	1.41	19.27	483,000	660	19.11	478,800	-	-
1957	1517	4,440	June 2, 1957	85	548	1.17	15.82	396,500	544	15.72	393,800	-	-
1958	1567	4,100	May 25, 1958	90	469	1.00	13.54	339,400	-	-	-	-	-
1959	1567	-	-	-	-	-	-	-	-	-	-	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-

Location.--Lat 44°39'16" 800 ft downstream from southwest of Knox, 1 1/2 miles east of Big Creek Post Office.

Drainage area.--22 sq mi, approximately.

Records available.--September 1944 to October 1958.

Gage.--Water-stage recorder. Altitude of gage is 3,950 ft (from river-profile map). Prior to Oct. 22, 1948, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--14 years (1944-58), 509 cfs (368,500 acre-ft per year).

Extremes.--1928-30: Maximum discharge, 5,800 cfs June 3, 1948 (gage height, 7.12 ft. from floodmark, former site and datum), from rating curve extended above 5,000 cfs by logarithmic plotting; minimum, 48 cfs Dec. 14, 1955 (discharge measurement), but may have been less during period of ice effect.

Remarks.--No regulation. Small diversions above station for irrigation.

Monthly

Water year	Oct.	Nov.	Dec.
1951	79.2	66.8	72.3
1952	67.3	59.5	56.7
1953	35.0	34.2	37.7
1954	41.0	46.8	43.0
1955	40.6	40.9	35.8
1956	43.8	59.3	112
1957	47.4	47.7	44.5
1958	51.5	41.5	36.8
1959	40.4	60.1	62.6
1960	67.8	60.7	43.3
1961	37.8	-	-

Water year	Oct.	Nov.	Dec.
1951	4,670	5,160	4,440
1952	5,370	3,560	3,460
1953	2,150	2,040	2,320
1954	2,520	2,780	2,650
1955	2,500	2,430	2,060
1956	2,690	3,530	6,690
1957	2,910	2,840	2,750
1958	3,170	2,470	2,360
1959	2,490	3,560	3,650
1960	5,400	3,610	2,660
1961	2,320	-	-

Year	WSP	Momentary Discharge	
		Inches	Acre-feet
1950	-	-	-
1951	1217	1,080	May
1952	1247	1,440	Jun.
1953	1287	1,260	Jun.
1954	1347	1,340	May
1955	1397	1,040	Jun.
1956	1447	1,620	May
1957	1517	1,510	Jun.
1958	1567	1,480	May
1959	1567	865	Jun.
1960	1717	815	Jun.
1961	1717	-	-

Weather Station

Daily/Monthly books - remarks & notes -
winds, clouds (partly, low), time of obs.,
night rain,

Mail monthly reading after 1st - 1st
mail plane each month - at least
by 6th. Could mail out on 30th & call in
last days. Total precipitation

CALL IN:

MAX MIN CURRENT RAIN SNOW ACC.
(CLOUDS, WIND, FOG)