WEATHER BUREAU TOPICS

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WEATHER BUREAU

TOPICS

JANUARY 1949

PACIFIC WEATHER PATROL TO THE RESCUE

Life with Pacific Weather Patrol is not *always* routine, according to the *Thunderer* of Region VI. One of the primary responsibilities of the U. S. Coast Guard, which provides ships for the patrol, is to carry on sea search and rescue duties as necessary. A weather ship is usually ordered to the scene of a rescue if it happens to be the nearest Coast Guard cutter. Later, another cutter may, if necessary, take over the towing or escort duty of the damaged vessel.

Most distress calls are made during the winter when weather conditions are most severe. But this year appears to be unusual in that a number of rescue missions involving weather ships occurred early in the fall.

On October 27 the USCGC *Taney* departed from Station Fox to assist the *Reefer King* which was bound from Puget Sound to Honolulu. The vessel was leaking badly as the result of storm damage and it appeared possible that it might sink. The *Taney* was relieved of escort duty October 30th by a cutter from Honolulu.

While enroute to Seattle from Station Able, the USCGC *Klamath* was diverted on November 2 to the Alaskan coast near Ketchikan to tow the Army LST 694. The LST had suffered from the pounding of heavy seas by having the foundation of its starboard engine thrown out of alignment.

The USCGC *Escanaba* left San Francisco the evening of November 16 for Station Able. One of the crew members accidentally smashed his fingers before the ship had been long at sea, so the vessel headed northeast and a cutter came out from Eureka, Calif., to take him off for shore hospitalization.

On November 17 the USCGC *Winona* left Port Angeles, Wash., for Station Fox. It was just out of Puget Sound when it was diverted south to stand by a vessel in distress off the mouth of the Columbia River until another cutter could reach the scene.

Rescues such as these continue all winter and have brought to the weathermen aboard the vessels a deep respect for the Coast Guard personnel who risk their lives time after time to save those of others.

National Oceanic and Atmospheric Administration
Weather Bureau Topics and Personnel

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ANIMALS PART OF ALASKAN LIFE

Birds, fish, and animals play a noticeable role in the lives of Alaskan weathermen, reports from the Region VIII newsletter, *Borealis Briefs*, indicate. Not only are hunting and fishing popular off-duty activities, but animals sometimes even get tangled up in station operations.

At Bethel the station has adopted a field mouse and affectionately calls him "Little Joe." With the coming of winter he has come inside, running over the shoes of everyone in the station when hungry, then disappearing as soon as fed. Newly waxed station floors have made his scamperings a precarious business, and station personnel are thinking of removing the wax before he breaks his neck.

Kotzebue is believed to have the only landing field in the world where it is necessary for the CAA to warn incoming planes of the hazard of seals on the runway. One of the 3 fields there is laid out on the ice, and last summer a seal whose hole in the ice was just off one side of the runway found the smooth surface of the runway irresistible as a place to bask in the sun. After various attempts by pilots and natives to shoot him, he apparently took the hint and left.

The seals at St. Paul Island have departed for the winter, leaving the island to the people, foxes, and reindeer. There are also a few birds left, but not much hunting goes on. The island is a game reserve and a paradise for camera fans. Birds and animals are tame and excellent camera shots are easy to get.

Among the few visitors to Barrow during November was a lonely eider duck which appeared in the sky 2 days before Thanksgiving. Landing in front of the CAA office, she curiously waddled in. In spite of the imminence of the fall feast day the duck displayed no fear, but seemed to enjoy the warmth of the office while eating the oatmeal and milk fed her by station personnel. Warm and fed, she then waddled out again and took off to the south.

At Yakutat a mischievous black bear amused himself for several nights upsetting garbage cans. Several men with guns lost considerable sleep waiting up for him, but before anyone could get a shot he apparently lost interest and wandered off to different play grounds.

THE LIBRARY---AT YOUR SERVICE

The largest and most complete collection of meteorological literature in the world reposes on the shelves of the Weather Bureau Library. Some of the material is good, some of it bad; some was written for the juvenile, some circulates only to the technician. But the whole collection is available to all Bureau employees, and, through inter-library loans, to the general public.

First book to be accessioned in the library was the "Report of Select Committee on New Orleans Riots, 1867." This is hardly in the field of meteorology, but the collection was originally the library of the Office

of the Chief Signal Officer, and the majority of the early accessions were military rather than meteorological in character. By 1873 there were 2,802 volumes in the collection, and this more than doubled in the 5 years following. By 1891, when the Weather Bureau came into being, the number had grown to 16,000, and this doubled in the first 25 years of the Bureau's life. At present the library contains more than 100,000 volumes.

WIDE USE URGED

Organizationally, the library is part of the Division of Scientific Services. But its service is available to every person in the Bureau, and Librarian Robert Aldredge urges everyone to make the greatest use possible of it.

Because of its nature as a specialized library, the subject matter is almost exclusively meteorological and climatological, although related subjects of physics, mathematics, geography, and aviation are well represented. The needs of the Bureau's administrative people have also been recognized, and volumes on personnel, management, fiscal, and legal matters are available.

The collection of daily synoptic weather charts, undoubtedly the largest in the world, played an important role in the preparation of the Historical Weather Maps prepared during the war years. The climatological data and observations were equally important in preparing guides and surveys as preliminary studies to military activities as early as mid-1941. The library rarely failed to produce available published matter for all world areas in this all-world conflict. It is still weak in the bibliographic field because a shortage of personnel in previous years made it impossible to catalog the incoming literature properly. The enormous increase of post-war literature made this problem more acute. The staff has now been increased, however, with emphasis on cataloging.

SERVICE BEING IMPROVED

Certain fundamental reference texts are furnished all field stations, and the entire collection is available to Bureau personnel on loan at all times. Reference service and the preparation of bibliographies will gradually increase as the cataloging is completed. An information circular is issued monthly, listing current accessions, and often carries brief lists of topical literature.

Although emphasis in the library is on current literature, it tries to maintain a complete file of meteorological publications, including rare works of an earlier era. The earliest book on weather in the collection was published in 1485. Through close cooperation with other national weather services there is a free exchange of official publications with all of them, and the collection now contains material in almost every published language.

SERVICE-AT-ONE-STATION CONTEST

A greatest-number-of-years-at-one-station contest, set off by the publication of November TOPICS, this month received a new contender for the crown. In November we stated that Fred H. Ackelow, who entered the Bureau at Indianapolis, December 9, 1903, and retired there September 30, 1948, nearly 45 years later, possessed the longest period of service at one station on record. This was challenged in December by the record of Dean Blake at San Diego, who entered the Bureau at that station March 1, 1902, giving him a period of service in one spot of almost 47 years.

The newest candidate for this title is Frank E. McLeary, OIC at Toledo, Ohio. The Chicago Regional Office has furnished the information that Mr. McLeary has been at Toledo for nearly 50 years, having been appointed to that station October 1, 1898. This, according to Central Office records, is exceeded by no other employee.

Mr. McLeary's continuous service at Toledo, however, officially dates only from 1904, as he was assigned to Wilmington, N. C., for 4 months during that year. The service of Mr. Ackelow and Mr. Blake has been continuous at their stations.

ONLY TWO OIC'S IN 57 YEARS AT HAVRE

From 1891 to the present, a period of 57 years, there have been only two men in charge of the Havre, Mont. WBO. Charles W. Ling was placed in charge September 1, 1891 by transfer from the Army Signal Corps, and stayed in the post until his death in August 1926. This was the first 35 years. Frank A. Math replaced Mr. Ling and remained as OIC until his retirement November 13, 1948, a period of 22 years and 2 months. The total for the two men was thus 57 years.

This is believed to be a record of some sort for first order stations. If it can be topped, or if there are similar records at other stations, the Central Office would like to know about them.

WBAS, LOS ANGELES ENTERTAINS VISITORS

Nearly 4,000 people visited the Los Angeles WBAS on November 14 during a day of open house at the airport, reports the Sixth Region *Thunderer*. From 9 a. m. to 6 p. m. John Aldrich, Jack Thompson, Larry Despain, and Hal Harvey paired off to answer the constant flow of questions about the display which had been prepared to show the Bureau's work. Among the exhibits were various maps and charts, sample teletype State forecasts, and airway weather circuits. Instruments included a radiosonde with red silk parachute and balloon attached, cutaway radiosonde, night pibal balloon with water activated lighting unit, wind vane and anemometer, barograph, mounted max and min thermometers, thermograph, standard 8-inch rain gage, plus a tipping-bucket gage in full operation as the result of a device rigged to drip water into it.

NEW PHONE SYSTEM AT NATIONAL AIRPORT

Large numbers of telephone calls are an ever present problem at weather stations large and small. In seven major cities of the United States there is now in operation special telephone equipment which permits weather forecasts to be furnished to the public automatically through the dial system. But in cities not so equipped, stations are still faced with the problem of answering personally the volume of calls. Even in the cities with the automatic equipment, stations still have the problem in connection with non-routine calls.

WBAS, Washington, had the inadequacy of its existing telephone facilities brought forcefully to its attention in September 1944. The hurricane of that month which swept up the east coast of the United States resulted in such an overload of telephone traffic at the National Airport station that action was begun immediately to improve the facilities. The ordinary telephone load would have justified installation of a manual switchboard, but addition of personnel to operate the board was felt undesirable if automatic equipment could be procured to do the job. Not until 1946, however, was such equipment developed by telephone engineers. A partial installation of the new equipment was made at that time, and then, in early summer 1948, complete installation. Since then the system has successfully handled much heavy traffic with a minimum expenditure of employee time and effort.

NEW EQUIPMENT

The installation at Washington National Airport depends for its effectiveness upon the use of a new type of fully automatic telephone equipment known as the "101 Keybox," operated in conjunction with interphone equipment connecting all parts of the station. The keybox, in addition to eliminating the need for a manual switchboard, can bring as many as 10 trunk lines to each telephone extension. It automatically switches incoming calls into open lines when some of the trunks are busy ("hunting over"), allows incoming calls to be answered at any instrument equipped with buzzer or bell, and permits the calls to be transferred quickly and easily to any other instrument.

A keybox is installed at each extension. In addition, Webster Teletalk equipment is installed in the immediate vicinity of the extension. This consists of "master" stations at points where calls to other parts of the office must be originated, and "speaker-mikes" where inter-office calls ordinarily need only be answered.

On the face of the 101 Keybox, for each incoming trunk line, are two indicator lights (white and green) and a three-way key "up," "down," and "center". In addition, there is a special "hold" key at the right of all others which permits telephone calls to be held while transferring them to another extension. When all keys are in the "center" position, the phone is not hooked into any of the lines. To use the phone it is necessary to lift one of the keys into the "up" position before dialing.

OPERATION EFFICIENT

All incoming calls are taken at a central point. When one comes in, the white light for that trunk line (on all keyboxes) flashes in concert with the ringing of the bell or buzzer. To answer, the key must be lifted to the "up" position in addition to the receiver being taken off the hook. The white light then burns steadily. If the call is to be transferred to another extension, it is placed on "hold" (green light) by lifting the "hold" key momentarily to the "up" position. The office desired is then contacted by Teletalk. When the call is answered the green light goes out and the white light burns steadily again. As many as nine calls may be held at any extension while the phone is being used for the tenth trunk.

The interphone system has proved an efficient means for transferring telephone calls, especially when the person desired is not where expected. For example, if a call comes in for Joe Doakes, whose office is in a different room from where the telephone is answered by Miss Susie Que, she will put the call on "hold" and call his office via Teletalk, "Mr. Doakes on No. 1." If there is no answer, it is immediately apparent that he is not in, and Susie tries some other office. If someone else in Doakes' office says, "He's down with Smith," then Susie can page him there. When located, Doakes answers, "Got it," to the interphone, flips the No. 1 key on the nearest telephone and has his call without waste of time.

USE OF SUBPROFESSIONAL

At WBAS, Washington, a subprofessional employee is assigned to control of incoming telephone traffic instead of a typist or switchboard operator. This has been found efficient because of the increased number of inquiries the girl herself can answer without taking the time of a higher grade employee. Because of the simplicity of the system, the girl also performs considerable other desk work between calls unless the traffic is unusually heavy.

The system described above of course involves extra expense for installation of the new equipment, and at small stations it would not be justified. But at some of the larger stations, where the cost of the extra equipment can be offset by time savings as compared to operation of a manual switchboard, plus improved service to the public, the system can be most efficient. Estimates of costs and details of installation can be developed by local telephone company engineers.

If it appears that such a telephone system would increase the efficiency of an office, the Regional Office should be advised. Cost estimates and drawings showing the present and proposed telephone layout should accompany any proposal, so the Regional Office may have the facts on which to base a decision as to whether the 101 Keybox system should be installed and whether such an installation could be supported from regional allotments.

An article in the February TOPICS will describe a somewhat similar system which has been in successful operation at Denver since July 1948.

SR&F MAN MAKES PACIFIC SURVEY FLIGHT

In response to an invitation from the U. S. Air Force, Charles S. Connolly of the SR&F Division recently accompanied Air Force representatives on a survey of weather communications in the Pacific area. The survey team departed from Washington October 6, and proceeded by military aircraft to San Francisco, Honolulu, Guam, Tokyo, Manila, Shanghai, and neighboring places. Return to home base, with much information on communications facilities in the area traveled, occurred 25,000 miles and 45 days later.

Mr. Connolly says the trip was a stimulating experience—like watching a flat, lifeless map of far-away places unfold into real ocean, islands, cities, and villages alive with local color. Walking through the narrow pathways of a native village on Okinawa seemed like strolling back into the pages of ancient history. Small huts with grass roofs, dirt floors, and open fireplaces were set close to each other inside a low, protective barrier made of branches and sod. Set in the open sunlight out of doors were shallow wooden bowls partially filled with small, smooth stones used, presumably, for grinding grain into flour. Tools were few and simple. The only form of machinery in evidence was the battered remnants of a modern airplane!

On one leg of the trip an unusual formation of clouds was seen. In the bright moonlight, from a height of 10,000 feet it appeared that cumulus clouds below were standing like soldiers in circular rows around an empty arena 30 miles in diameter. The view called to mind descriptions of the eye of a hurricane or typhoon. When the plane entered the towering clouds after crossing the clear space it and its occupants were tossed about considerably.

On the flight from Kwajalein to Johnson Island, November 13, the party also witnessed a long-tailed comet which was visible from about 2:30 a. m. until daylight. It had been seen locally for the previous 10 days, but was as yet unidentified.

OUT OF THE PAST

The folkways of one day, natural and logical when current, often seem amusing at a later day. The Weather Bureau is no different from any other group in this respect, and this quaint flavor of history may be tasted by dipping casually into past files of TOPICS. Thus, in June 1926 the Central Office felt it necessary to instruct the field that, "when reporting the name of a prospective appointee, station officials should bear in mind that diminutives should never be used when it is possible to get the correct name. Such names as 'Charlie' or Jimmie' are not only incorrect in most cases, but always provoke question and have to be officially changed as the bearers get older."

A few months earlier, in February 1926, a reminder concerning another matter appeared. "Weather Bureau officials and employees have important duties and a recognized standing in all communities served by the Weather Bureau. Neatness in person and a reasonable regard to

personal appearance are necessary to maintain this standing and will inure to the advantage of both the individual and the bureau. This reminder is inserted in the belief that any laxness in this respect on the part of officials and employees will be remedied as soon as their attention is directed to the matter."

ALARM CLOCKS

"A few alarm clocks," announced the September 1925 issue, "are available for stations that may need them. However, such clocks can be used only in Government offices and for official work. Decisions of the Comptroller General permit the Government to provide nothing for personal use, even when used in connection with official duty."

This was given added point in 1928, when the February issue announced that "The General Accounting Office recently disallowed an item of $2, for an alarm clock, in a station reimbursement account, and stated that, 'The awakening of an employee for the purpose of enabling him to be punctual in reporting for regular daily duty is a personal matter, and the purchase of an alarm clock for this purpose to be used by the individual is considered a personal expense.' . . . This ruling makes it necessary for the Central Office to be in a position to explain why each alarm clock is issued. Therefore, every request for an alarm clock, hereafter, should state specifically the official need for and the particular use to be made of such clock; otherwise the request cannot be complied with."

TWO BRIGHT YOUNG MEN

In the same issue the progress of a rising young meteorologist was noted, "On account of the satisfactory averages attained in practice forecasting by Mr. W. F. McDonald, assistant meteorologist on duty at New Orleans, he has been granted authority to issue official forecasts for the New Orleans district in emergencies, and to give occasional relief at night to the forecaster on duty."

Another bright young man, about a year earlier, was getting acquainted with a different section of the country. In November 1926 it was announced that, "A first order, one-man, Weather Bureau station will be opened at Medford, Oreg., about December 15. As the station is intended primarily for airways service, pilot balloon observations will be made twice daily, but only limited observations of surface conditions will be made. Mr. D. M. Little, from the Ithaca station, will be in charge."

EASTERN TRAINING OFFICE ESTABLISHED

The Eastern Area Training Office is now established with quarters at the Washington National Airport.

The staff of the new training office consists of David A. Lawson in charge, and his secretary, Mrs. Charlotte Robinette. Mr. Lawson was formerly a training officer at Kansas City, and Mrs. Robinette is a recent graduate of Strayer Business College.

The Eastern Training Office has already gotten into production in its new quarters, with the issue of training materials for the new codes which went into effect January 1.

THE NEW METEOROLOGICAL SERVICE MAP

The September 1, 1948 edition of the meteorological service map of the United States (W. B. No. 1806) has been printed and distributed. Measuring 26 inches by 40 inches, this map has been printed in 5 colors and it is in its entirety a product of the Weather Bureau.

A size and projection used by the U. S. Coast and Geodetic Survey for the Civil Aeronautics Administration's aeronautical planning chart was selected. Map No. 1806 can now be used in connection with aeronautical planning chart No. 3060b since the two bases coincide exactly.

The new map base has a scale of 1 to 5,000,000, and is printed in two shades of blue. Small inset maps drawn to a scale exactly 10 times that of the main map, show the metropolitan areas of nine of the largest cities in the country as well as five other important coastal cities.

Weather Bureau regions and the built-up areas are printed in transparent yellow, which, together with the blue of the base, has been found by experienced map publishers to contrast best with red and black overprinting.

Information symbols and names are printed in black and red. These show where synoptic, airway, and supplemental weather observations are made, as well as the general services rendered at weather stations. Since reports originate at specific locations, not just the cities in question, the map shows its station symbols at exact locations which will vary slightly from standard maps merely using dots as city positions.

When a station is located at an airport, that fact is indicated by the name of the airport and not the symbol. If no airport name is given, the station is a city office or within some small town or at an isolated place. A special symbol indicates city offices or regional headquarters.

First order stations are shown by red capital letters, and places where there are two stations, such as airport and city office, are both shown in red in their proper relationship. Stations other than those operated by commissioned personnel are shown in black.

Aviation interests have evidenced a demand for this map, and an edition was printed showing the civil airways of the United States as well as certificated feeder-line routes. Those few Canadian airports reached by the extension of the airways beyond the border are indicated for reference and location.

It is requested that users of this map report any errors or make suggestions to the Observations Section of the Station Facilities and Meteorological Observations Division.

EMPLOYEES ORGANIZE CLUB

Weather Bureau employees now have their own organization, the "Weather Bureau Club." Organized in the Central Office early in November, the club aims to promote welfare and good fellowship by providing facilities for educational and physical development, and by aiding and encouraging participation in social, educational, recreational, and cooperative activities. Any person employed by the Bureau is eligible for membership.

At the organizing meeting November 1, Clarence A. Woollum, WBAS Washington, was elected president. Vice-presidents include Walter G. Leight, A. V. Carlin, Robert F. Dale, and Ralph L. Higgs. John W. McCook was named treasurer and Elizabeth C. Collins secretary. Directors elected were W. F. McDonald, R. H. Weightman, and R. C. Schmidt.

BLIZZARD DOESN'T STOP WEATHERMEN

"The severest November blizzard on record" in western Kansas and Nebraska occurred on November 18 and 19, but for Weather Bureau employees it was "business as usual" despite difficulties. The December issue of the Region V *News Letter* describes some of their experiences.

At Dodge City, Kans., OIC Ralph V. Hanlon reports that the storm stopped all traffic and disrupted communications. Observer John D. Gholson went to work at 4 p. m. on November 18, but was not relieved until 9:30 the next morning. Since the teletype lines were down the only way to transmit observations was by long distance telephone to Wichita. Power lines were also down, so the emergency power from CAA had to be used. But since this was not connected to the blowers on the gas stoves in the building, there was no heat. Paul A. Reed attempted to relieve Gholson during the evening, but could get only half way to the station, and spent the night in a farm house. The next morning Parker W. Martin walked 2 miles to work against a 40 to 50 mile wind.

"HAM" RADIO USED

At Goodland, snowdrifts were piled 10 to 12 feet high. Observers Paul L. Bredeman and John C. Nowak stayed on duty from midnight of the 18th until relieved the next day, rotating the observations to get some sleep. Bredeman left the office at 11 a. m., and Nowak at 2 p. m. when OIC Arthur R. Magee arrived after walking out from town. He in turn stayed on duty until relieved by Walter L. Slansky at 9 a. m. of the 20th. Then Robert D. Bottom worked from 4 p. m. of the 20th until 8 a. m. of the 21st without relief.

From North Platte WBO, OIC Frank T. Henley reported, "The combination of low visibility and slick spots on the road caused many minor accidents. There were no serious accidents. We cannot help but feel that the timely warnings issued by the Weather Bureau over the radio, to the Nebraska Safety Patrol, to the bus depots, and transportation agencies in town helped to keep accidents down."

WARNINGS APPRECIATED

Whatever the difficulties in carrying out their jobs, weathermen usually feel it was worthwhile when they get letters like one received by OIC Victor V. Phillips of Wichita from a citizen of Newton, Kans. "I'll take this opportunity to thank you for your service in warning us farmers of approaching storms. When I got your warning I made plans

to take care of the stock. I hired additional help, finished bringing in a stack of baled hay, brought alfalfa into the corral, ground feed for the steers, repaired windbreak and bedded the stock. Needless to say, when the storm hit late last night I was fully prepared. I also have some neighbors who, because of religious reasons, do not keep a radio. I called them on the phone and told them of the impending storm for which they were very thankful. So you see that your work is of inestimable service, and all we can say is THANKS!"

RETIREMENTS

FOY N. HIBBARD.—Official in Charge at WBO Sandusky, Ohio, retired November 30, 1948. Mr. Hibbard first entered the Weather Bureau as an assistant observer at Columbus, Ohio, in March 1915 and except for a short period in 1919, served continuously at various stations. Some of his assignments included Chicago, Ill.; Duluth, Minn.; Richmond, Va.; and Pomona, Calif. He was affiliated with the American Association for the Advancement of Science and with other professional groups.

ALONZO A. JUSTICE.—Retired November 30, 1948, from his position at WBO Columbia, S. C., at the age of 70 after more than 42 years of service. Mr. Justice entered the Weather Bureau in 1906 at Fort Worth, Tex., and was an observer with the Meteorological Service at Panama from 1909 to 1913. He was Official in Charge at Wagon Wheel Gap, Colo.; Dodge City and Wichita, Kans.; and Lynchburg, Va. Rather than retire prior to the compulsory age of 70, Mr. Justice in 1944 voluntarily requested a reduction in grade from his position at Lynchburg in order to remain in the Bureau and and in the Southeast. Other assignments included Galveston, Tex.; Milwaukee, Wis.; Salt Lake City, Utah, and Denver, Colo.

FRANK A. MATH.—Official in Charge at WBO Havre, Mont., retired November 13, 1948, after more than 46 years of Weather Bureau service. Mr. Math first came to the Bureau in 1901 at Ithaca, N. Y., and subsequently served at numerous stations. In addition to his official Weather Bureau activities, he has found time to maintain asssociations with the Chamber of Commerce and other civic organizations. He has served at Havre since 1926.

CHARLES D. WALKER.—Hand compositor, Jacksonville, Fla., retired October 31, 1948. Mr. Walker is 67 years of age. He entered the service at Lincoln, Nebr., in March 1917 and at the time of his retirement had over 31 years of service.

F. W. Reichelderfer

F. W. REICHELDERFER
Chief of Bureau.

(WB—1-25-49—725)

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WEATHER BUREAU

TOPICS

FEBRUARY 1949

CODE CHANGES DON'T COVER EVERYTHING!

Now, winter's here and winds again
Roar through the fields and vacant lots,
With gusts and squalls – long known to men –
But now, instead of miles, it's knots.

New blizzards rage – northeasters blow –
Deep snow in drifts – the rivers freeze –
The winds that men by compass know
Are strangers now – they're in degrees.

'Neath leaden skies, low clouds are racing
And (as in other years) they mock us,
Although in tenths we're estimating,
We have to put the stuff in octas.

Don't be deceived by winds in knots
Or by conversion to degrees.
When winter roars through vacant lots –
As always wear your O. F. D.'s. *

—*Sadie Synoptics.*

* Old Flannel Drawers.

DEAN OF WEATHERMEN RETIRES

The dean of weathermen in point of service, Eugene D. Emigh, Official in charge at WBO Montgomery, Ala., retired December 31, 1948 after more than 50 years in the Bureau. Mr. Emigh entered the Bureau as a messenger boy ($25 per month) at Cheyenne, Wyo., on June 1, 1898. He soon rose, however, to Official in Charge at Topeka and Dodge City, Kans. Transfer to Baltimore in 1905 brought new responsibilities. Although nominally first assistant to Dr. Oliver L. Fassig, he carried on the duties of OIC because Dr. Fassig and succeeding officials (including the famous pioneer meteorologist, Dr. Cleveland Abbe) were more concerned with scientific projects than station management, and so left the latter duties entirely up to him. From Baltimore he went to Charlotte, N. C., and Augusta, Ga., in charge at both places. At

Augusta came initiation into the river and flood problems which were to be a special interest for the rest of his career. After 23 years at Augusta he was transferred in 1933 to Montgomery, Ala., his final assignment.

Mr. Emigh's wide interests brought him into membership in numerous scientific organizations. As he confessed in an autobiographical sketch in 1945, "My main hobby is belonging". To substantiate this statement, a few of the organizations in which he held membership are:

American Association for the Advancement of Science; American Meteorological Society; American Geophysical Union, Meteorology, Hydrology; Southern Association of Science and Industry (Chairman, Alabama Membership Committee); Alabama Academy of Science (Chairman, Committee on Membership and Activities).

At the time of his retirement Mr. Emigh was president of the Alabama Academy of Sciences, and a member of of the Montgomery Rotary Club, of which he had been twice president.

The Region II BREEZE pays him this tribute:

As a public official, Mr. Emigh set a high standard of zeal, faithfulness, and accomplishment; as a citizen he will be remembered for his unselfish devotion to the public weal; as a friend and neighbor, his helping hand and ready sympathy have endeared him to all who were within the radius of his acquaintance.

Mr. Emigh's address upon retirement was 13 College Court, Montgomery, Ala.

GOOD READING — THE ANNUAL REPORT

Despite financial restrictions which forced the closing of several stations and curtailment of service at others, the Weather Bureau during 1948 continued to improve its operation and service to the public. These problems and accomplishments are described in interesting detail in the Bureau's Annual Report to the Secretary of Commerce, being distributed to all first-order stations.

The daily press continues to devote more space and the reading public to evidence greater interest in weather news, the Report informs us, than in any other single subject except war news. To help satisfy this appetite for weather information and reduce the load of telephone calls, the number of daily radio broadcasts direct from weather stations was increased by 67 during the year. Broadcasts are now made from 155 stations on 457 programs daily.

TELEVISION TRIED OUT

Early in the year several demonstrations of the possibilities of television were arranged to persuade television program managers to set up their own facilities for broadcasting the weather maps and forecasts available every day through the Bureau. By the end of the year a few stations had scheduled such programs and several others expected to do so as soon as practicable.

Experimental "flow forecasts" were undertaken in several FAWS units. The plan is to forecast marginal conditions when aircraft are likely to be "stacked up" over busy terminals so that pilots may be diverted to alternate terminals before traffic becomes congested. If successful the service will contribute much to safety and efficiency in air transportation.

In March 1948, and again in June, lengthy meetings were held with representatives from commercial meteorological agencies and the American Meteorological Society to work out better ways for cooperation with private consultants in meteorology. The Bureau has taken steps to inform business and industrial concerns who need individual attention about the services of consulting meteorologists and the fact that the Government cannot fill business requirments for such individual services.

REGIONAL ADMINISTRATION

Administrative costs in the Central and Regional Offices continued to be kept low as compared with industrial averages. The Regional Offices suffered some curtailment in personnel during the year. From 1941 when the field was organized into regions, the personnel allowances of Regional Offices have been low. In fiscal and other business management functions these offices have broad responsibilities, but in policy making, program planning, and professional services, their duties are limited to certain advisory functions, leaving the service program under the leadership of specialists in the Central Office. This form of administration is deemed advantageous in the multiple service work of most field stations.

These are samples of the items in the Annual Report. More detailed information about these and other activities may be gotten by reading the Report itself.

FIRE IN THE ARCTIC

The joint U. S.-Canadian weather station at Eureka, N. W. T., Canada, suffered considerable loss of property (but fortunately none of the personnel were injured) in a fire on Christmas morning. With the temperature at $-55°$ and a strong wind blowing, it was impossible to stop the blaze, which completely destroyed the Quonset and attached Jamesway hut used for a generator building and garage. The result was total loss of the power supply, tractor, tools, and the building. Buildings at all Arctic stations are separated to reduce the fire hazard, and this saved all but the one building where the fire started. Replacement of the items destroyed is already well under way, and a plane departed for the North on January 10 with an emergency replacement supply.

In spite of the emergency, the staff missed no surface observations and since a spare generator was set up, upper air soundings were resumed within 20 days.

THOMAS PATRICK RETIRES AFTER 46 YEARS

Thomas Patrick, whose father also spent more than 40 years with the Signal Corps and the Weather Bureau, retired from the Materiel Section of the Central Office on December 31, 1948, after more than 46 years in the Bureau. His entire service was in the Central Office. Mr. Patrick was active in fraternal organizations and made many friends among his co-workers. On his last day of duty the Chief of Bureau and other officials assembled to present him with several gifts and to wish him well. Mr. Patrick's address upon retirement was 2115 "N" Street, NW. (Apt. 2), Washington 7, D. C.

FLOODS FOILED AT CAMBRIDGE, NEBRASKA

A dramatic example of the savings in lives and property made possible by cooperation between public-spirited citizens and the Weather Bureau, is graphically described in the *January News Letter* of Region V.

Cambridge, Nebr., is situated at the confluence of Medicine Creek and the Republican River. Medicine Creek has a drainage area of approximately 800 square miles and is occasionally subjected to heavy spring rains. During the afternoon and night of June 21, 1947, torrential rains occurred in the basin, and during the early morning of June 22 a devastating flood was experienced in Cambridge and Curtis. Nine lives were lost in Cambridge, and property damage was estimated at $300,000.

WARNING NETWORKS SET UP

The Chief of Bureau therefore authorized the Regional Office to establish a flash flood warning network for that area. Four key points from which reliable rainfall reports could be obtained were selected and observers appointed. These observers were instructed to telephone rainfall amounts, in increments of 1 inch as observed, to Ray L. McKinney, flood warning representative at Cambridge. Mr. McKinney was selected as the representative because of his ability and his enthusiasm to render public service.

All reports were to be telephoned to Mr. McKinney, and to the Topeka River District Center. The Missouri River Forecast Center, Kansas City, Mo., made an analysis of all available rainfall and run-off data and developed a forecast procedure for use locally at Cambridge. This was expressed in tabular form and considered the following variables: (1) total rainfall; (2) soil moisture (antecedent precipitation); (3) season; and (4) duration. Mr. McKinney was instructed in the use of the various tables. He then took action to set up the flood warning system. He met with the town board and through it arranged with the fire department and telephone exchange to distribute information and evacuate people as required.

LIVES AND PROPERTY SAVED

On June 21–22, 1948, exactly 1 year after the 1947 disaster, heavy rains again fell over a major portion of the basin. Under the alert and

competent supervision of Mr. McKinney the flood warning system was put into operation. The forecasts were accurate (in fact, 100 percent correct) and distribution was accurate and timely. Approximately 200 families were evacuated and it appears reasonable to assume some lives were saved due to the warnings. The total cost for collecting reports and disseminating information for this flood did not exceed $40, and the reported property saving was $110,000.

AWP HEADQUARTERS MOVES TO NEW YORK

The Atlantic Weather Patrol supervising office, formerly in Boston, is being moved to New York for more advantageous operation. Assistant supervisors have been assigned to Boston and Norfolk, Va., to assist in the operation of the 27 U. S. Coast Guard vessels now being used in the project. These ships are based at Portland, Maine.; Boston; New York; Norfolk, Va.; and Wilmington, N. C., and with the establishment of the new station DOG on January 9, they operate at five different stations in the Atlantic. This number will be increased to eight by the end of the current fiscal year. Station FOX will be located at latitude 35° N, longitude 40° W; station GEORGE at latitude 46° N, longitude 29° W; and station HOW at latitude 36° N, longitude 70° W.

PARRY HONORED ON RETIREMENT

Benjamin Parry, who retired as Official in Charge of the New York City Office December 31, 1948, was honored by the Maritime Exchange of the Port of New York and by his Weather Bureau colleagues at a reception and dinner on December 15. Voluntarily ending his 45 years of distinguished service to carry out long-cherished plans for his retirement, Mr. Parry was the recipient of awards and gifts which left no doubt of the esteem in which he is held by all who have known him.

The afternoon reception, held at the Maritime Exchange, was attended by 200 representatives of the business interests of New York City, principally shipping men who were closely associated with Mr. Parry during his many years as director of the marine work of the New York WBO and as its Official in Charge. Capt. P. B. Blanchard, treasurer and director of the Maritime Association, presented Mr. Parry with a scroll engrossed with resolutions adopted at a special meeting of the Association held earlier in the day. The citation read, in part:

Whereas, Benjamin Parry has served shipping and all other interests faithfully and efficiently in the Weather Bureau since 1903, and as Chief Meteorologist at 17 Battery Place, New York City, since 1943; and . . .

Whereas, Mr. Parry's inherent modesty, unfailing courtesy, and high integrity have endeared him to all who have had the good fortune to know him; now, therefore, be it

Resolved, That the Maritime Association of the Port of New York expresses to Mr. Parry, on his retirement from the Weather Bureau on December 31, 1948, the sincere appreciation of its members and his numerous friends for his worthy accomplishments, and wish him many years of good health and happiness, and be it further

Resolved, That these resolutions be engrossed and presented to Mr. Parry over the Seal of the Association.

The National Organization of Master Mates and Pilots of America also sent a message of felicitation.

The Chief of Bureau, unable to attend the reception as planned, sent as his representative L. E. Brotzman, Chief of the Plans and Program Management Office in the Central Office. Mr. Brotzman brought with him the message which Dr. Reichelderfer had prepared for the occasion, and it was read by W. J. Moxom, director of Region I. In opening his remarks, the Chief stated:

The Weather Bureau has long regarded the Maritime Association and the important activities which it represents as second to none in its understanding collaboration and moral support of the Bureau and the services it offers to the public. And we never forget that merchant shipping and maritime commerce in general are among the most vital operations we have to serve.

Continuing, Dr. Reichelderfer said:

The Weather Bureau is very proud of Ben Parry and we have good reason to be. He is a fine example of the success story so well known in America, where a young man can start out at the bottom and without influence and favor, but by hard and faithful service and by firm adherence to fine principles, eventually work his way to the top of his profession. Mr. Parry has done that. He started work with the Weather Bureau in 1903 as a messenger boy in our Boston office.

After alluding humorously to the transformation on the Bureau's records of "Benny" Parry to "Benjamin" as the young man attained the dignity of manhood, the Chief traced Mr. Parry's progress from assignments at Boston, Providence, New Orleans, and Cincinnati to his coming to the New York office in 1910 and his succession to Dr. James Kimball as head of that office in 1943.

At a dinner held on the evening of December 15, Mr. Parry was also honored by his colleagues at the City Office and by associates from the Regional Office and the Airport Stations at LaGuardia Field, New York International Airport (Idlewild), and Newark. His address on retirement was 461 Third Ave., Lyndhurst, N. J.

ATLANTA FIELD AIDE NOW INTERN

Alfred L. Lorenz, field aide in the Atlanta Regional Office, has been selected for participation in the Civil Service Commission's Ninth Administrative Intern Program. He was one of the 26 interns selected from the Government, as a whole, and one of the four from the Department of Commerce. The program, which began February 7, will continue until June 30, and includes university training, a series of work assignments in various Government agencies tailored to individual needs, conferences with top Federal officials, individual counsel, and weekly seminars on Government administrative problems.

DENVER USES INTERCOM ADVANTAGEOUSLY

Last month we described the use of an interphone system in conjunction with keybox-equipped telephones at Washington National Airport.

The type of installation there was tailored to the need for handling a large volume of telephone calls on as many as 10 trunk lines, and to distribute these calls to at least a dozen different locations. It has been considered economical only for the larger stations.

Denver WBAS, with only about one-third the personal at WBAS Washington, has installed an intercommunication system tailored for use at medium-size stations with fewer calls, fewer trunk lines, and fewer points of reception. With three trunk lines into the station, a keybox-buzzer combination had previously been used. On incoming calls it was necessary for the comunications unit, where calls were taken originally, to buzz the desired office, wait for an answer to the phone, advise whom was wanted, and then get that person on the proper line.

In the new installation the rented keyboxes are done away with entirely, and an intercom system was placed in operation in all offices in July 1948. The type of interphone used is more limited than the standard Webster Teletalk, accommodating up to six positions besides the central communications unit, but is more economical. The system was bought outright, and the previous rental cost of the keyboxes has been saved. It has been estimated that savings the first year, over and above installation costs, will amount to approximately $60, and the annual savings thereafter will be approximately $280.

Handling of incoming calls has been speeded up 100 percent. The communications unit is able to switch calls to any other unit, obtain the person called, and get him on the correct line with a minimum of time and effort. It is possible for any person in any unit to contact any person in any other unit without going through the communications unit. This has been found especially advantageous when the location of the person desired is not known, through use of the "all-call" feature for paging all units. Time-consuming search for individual employees wanted for discussion or phone calls has been eliminated. Communication between the forecast unit and the FAWS unit, especially in connection with special weather reports from other stations or PIREPS from the airlines, has been speeded up. As a result, the efficiency of the station as a whole, has been greatly improved.

JOHN B. HARRIS RETIRES AFTER 42 YEARS

John B. Harris, hand compositor at Louisville, Ky., retired December 31, 1948 at the age of 69, with more than 42 years of Government service. Mr. Harris entered the Bureau in November 1907 at Louisville and his service was continuous to the present time. His other Government service consisted of a year with the Government Printing Office prior to employment by the Weather Bureau. Mr. Harris had desired to continue his service until his 70th birthday, which would have been March 8, 1949, but serious illness intervened. His address at time of retirement was 307 Breckenridge Lane, St. Mathews, Ky.

APPLYING SCIENTIFIC MANAGEMENT

The use of scientific principles in the solution of management problems, known as "scientific management," has been a successful technique in industry for many years. During the war, management consultants gave the same technique wide usage in the Government, and to-day the movement continues to gain momentum. Basic principles of scientific management, however, are not new. They were developed by Frederick W. Taylor in the closing years of the last century, and are generally as sound to-day as they were then.

"Scientific management technique," according to Dr. H. S. Person, usually recognized as the foremost authority on Taylor's ideas today, "is a *technique of approach*; of approach to the solution of the management problem presented by each separate management situation. It is not something definite, something crystallized, something that can be bought and sold, imitated or stolen, transferred from one place to another and installed like a boiler or a milling machine. It is a way of discovering what the particular management technique should be for each particular situation. The physician has a definite technique of approach to a medical case, but each case is a special problem. The lawyer has a definite technique of approach to a client's case, but each client's case is different from every other. Thus it is in every instance where science is brought to the aid of performance in situations compounded of variable elements."

TAYLOR'S TESTIMONY

The principles of the correct application of this technique of approach to management problems were laid down by Taylor himself in his testimony before a Congressional Committee in 1912:

The first of these principles, then, he said, may be called the development of a science to replace the old rule-of-thumb knowledge of the workmen. (Dr. Person expresses this as the development of an accurate body of facts relating to the forces, factors, and effects in the situation.)

The second group of duties which are voluntarily assumed by those on the management's side, under scientific management, is the scientific selection and then the progressive development of the workmen. It becomes the duty of management deliberately to study the character, the nature, and the performance of each workman with a view to finding out his limitations on the one hand, but even more important, his possibilities on the other hand; and then, as deliberately and as systematically to train and help and teach this workman; these opportunities for advancement will finally enable him to do the highest, most interesting and most profitable class of work for which his natural abilities fit him, and which are open to him in the particular company in which he is employed. This scientific selection of the workman and his development is not a single act; it goes on from year to year; it is the subject of continual study on the part of management.

MEN PLUS SCIENCE

The third of the principles of scientific management is to bring together the science and the scientifically selected and trained workmen. I say "bringing together" advisedly, because you may develop all the science you please, and you may scientifically select and train workmen just as much as you please, but unless some man or some men bring the science and the workmen together all your labor will be lost.

It is perhaps most difficult for the average man to understand the fourth principle of scientific management. It consists of an almost equal division of the

actual work of the establishment between the workmen, on the one hand, and the management, on the other hand. Under the old type of management practically all of the work was done by the workmen; under the new, it is divided into two great divisions, and one of these is deliberately handed over to those on the management's side.

There is hardly a single set or piece of work done by any workmen in a shop with scientific management which is not preceded and followed by some act on the part of the men in management. All day long every workman's act is dovetailed in between corresponding acts of the management.

Under this intimate, close, personal cooperation between the two sides it becomes practically impossible to have a serious quarrel.

RETIRED WEATHERMEN TO GET TOPICS

The Weather Bureau clan, though a far-strewn one, is bound together by ties of common experience and the Bureau organization. When a weatherman retires, most of the associations which were so much a part of his daily life are cut off. But this need not necessarily be so. The Central Office wishes to assist in keeping these ties from being completely severed.

A complete list of retired people, with the latest available addresses, will be published for the use of all who wish to get in touch with old friends. To assist the Central Office in bringing and keeping its records up to date, it is requested that anyone knowing of cases where the address published is not the most up to date will furnish the Central Office with the correct information. The first instalment, those who retired in 1948, appears below.

Fred H. Ackelow, 4046 Park Avenue, Indianapolis 5, Ind.
John C. Adams, 3611 Westcliff Road So., Fort Worth, Texas.
Miss Esther Anderson, 1632 30th St., NW., Washington, D. C.
Miss Mary E. Bell, 1830 R St., NW., Washington 9, D. C.
William A. Chambers, Jr., 106 Washington Place, New York, N. Y.
Donald C. Clark, Box 912, Yuma, Ariz.
Harry C. De Ment, 1108 Laird Ave., Parkersburg, W. Va.
Robert M. Dole, Chambers Road, RFD No. 1, Cape Elizabeth, Maine.
Ernest E. Eklund, 1247 Monticello Road, Napa, Calif.
Eugene D. Emigh, 13 College Court, Montgomery 6, Ala.
Ray L. Fisher, 4615 NE. Rodney Ave., Portland, Oreg.
William C. Haines, 540 North and South Road, University City 5, Mo.
John B. Harris, 307 Breckinridge Lane, St. Matthews, Ky.
Foy N. Hibbard, 305 Camp Street, Sandusky, Ohio
James H. Jarboe, 161 Hermine Blvd., San Antonio 1, Tex.
Harley N. Johnson, 823 7th St., Rapid City, S. Dak.
Foster V. Jones, Veterans Administration Hospital, Oteen, N. C.
Alonzo A. Justice, Apt. D-2, Colonial Village, Columbia, S. C.
Joe L. Linsley, 59 Highland Park, Little Rock, Ark.
Albert F. Magrum, 312 Grosvenor Lane, Bethesda 14, Md.
Frank A. Math. 210 2nd St., Havre, Mont.
Eskil M. Nelson, 4302 SE. 43rd Ave., Portland 6, Oreg.
Benjamin Parry, 461 3rd Ave., Lyndhurst, N. J.
Thomas Patrick, 2115 N St., NW. (Apt. 2), Washington 7, D. C.
Millard V. Robbins, 5612 Pacific St., Omaha 6, Nebr.
Charles W. Rohrer, R. D. No. 2, Franklin Park, Falls Church, Va.
John E. Sanders, 2232 N. Booth St., Milwaukee 12, Wis.
Miss Mary Sherr, 2127 California St., NW., Washington 8, D. C.
Charles D. Walker, 1320 Felch Ave., Jacksonville 7, Fla.
Raymond L. Wilton, c/o WBRO, Kansas City, Mo.

A WELL MANAGED SNOW!

The necessity of maintaining alert and continuous coverage of emergency weather situations is emphasized by Circular Letter 111–48. Coincident with the issue of that circular, the New York office was busily engaged in forecasting an expected snow in their area. Appreciation of the community for the service received is indicated by the following excerpt from a NEW YORK TIMES editorial appearing December 21:

Because of the unique problems it brings to a large, congested city any considerable snowfall produces excitement and some apprehension in New York. The mere forecast of snow a week before the anniversary of the great storm of December 26, 1947, was enough to start blizzard talk all over again. But the snow of December 19, 1948, although third deepest in the city's modern history, at 19.6 inches, was well-mannered and well-managed. The Weather Bureau did an excellent job of forecasting. It not only gave sufficient advance notice, but also kept the public advised of all possibilities as these became evident.

MILWAUKEE ASSISTANT RETIRES

John E. Sanders, principal assistant at Milwaukee, Wis., retired December 31, 1948. Mr. Sanders entered the Weather Bureau as an assistant observer at Washington, D. C., in November 1908. His assignments included Chicago, Ill.; Columbus, Ohio; Jacksonville, Fla.: Asheville, N. C.; Elkins, W. Va.; Wichita, Kans.; Apalachicola, Fla.; and Knoxville, Tenn. At the time of his retirement, Mr. Sanders had over 38 years of Weather Bureau service. His address is 2232 N. Booth St., Milwaukee 12, Wis.

PHILIPPINE PROGRAM CHIEF RETIRES

Foster V. Jones, formerly Chief of the Phillipine Rehabilitation Program, who has been ill in the Veterans Hospital at Oteen, N. C., for several months, retired December 31, 1948, on account of disability. Mr. Jones entered the Bureau in June 1928 as a junior observer at Scranton, Pa. Subsequently he served at Dubuque, Iowa; Albany, N. Y., Chattanooga, Nashville, and Murfreesboro, Tenn.; Cleveland, Ohio; and Louisville, Ky. Entering the Army in early 1942 he served in the European Theater of operations until March 1946, emerging a lieutenant colonel. Mr. Jones returned to the Weather Bureau, with the SR&F Division until assigned the job of establishing the Philippine Rehabilitation Program in January 1947 He was stationed at Manila, P. I., until illness forced him to return to the United States for treatment in the summer of 1948. His address on retirement was Veterans Administration Hospital, Oteen, N. C.

MANY STUDENTS VISIT TAMPA WBO

During 1948, so the Region II BREEZE tells us, some 879 students visited the Tampa, Fla., WBO. The students, in 24 groups, ranged from children in the second grade to college students at the University of Tampa.

CHRISTMAS IN FEBRUARY (*Maybe*)

The Christmas mail for the Arctic Stations is still on the way! A flight was scheduled to reach all stations just before Christmas, but repeated mechanical troubles with the aircraft, due to the extreme cold, have delayed the mail for the two most remote stations, Mould Bay (Prince Patrick Island) and Isachsen. The Weather Bureau Club in Washington contributed wholeheartedly to add to the presents furnished by the families of the men on the stations, the Arctic Operations staff made arrangements for Christmas trees and extra ornaments, but the planes couldn't get through. At the time this went to press the plane still hadn't gotten through, but there was hope that the flight would be completed in February.

ESKIL M. NELSON RETIRES

Because of illness, Eskil M. Nelson, hand compositor at Portland, Oreg., retired December 31, 1948. Mr. Nelson entered the Bureau at Portland, Oreg., March 1, 1938, as a printer and served there continuously until his retirement. He was active in civic and fraternal organizations. His address at time of retirement was 4302 S. E. 43d Ave., Portland 6, Oreg.

JOSEPH BILY DIES

Friends and associates of Joseph Bily, Jr., were saddened by the news that he died December 23, 1948. Mr. Bily had only recently retired from his position in the Baltimore, Md., City Office because of illness (December 1948 TOPICS). He was 63 years of age.

HONOLULU NOW SUPERVISING OFFICE

Administrative responsibility for Weather Bureau activities in the Pacific area is now placed on WBO Honolulu. With the transfer of this responsibility from the Regional Office at Los Angeles October 17, 1948, Honolulu became the supervising office for all Pacific overseas activities except the Philippine Rehabilitation Program. The office and its administrative area are now directly under the jurisdiction of the Central Office.

In fiscal and materiel activities, WBO Honolulu operates in the same manner as a regional office. All personnel actions, however, are processed at the Central Office, and inquiries concerning employment at stations in the Pacific should be directed there.

AUTOMATIC PHONE SYSTEM AT MILWAUKEE

Milwaukee, Wis., on December 27, 1948 became the seventh city in the United States to install automatic telephone service for weather information. The 24-hour service is secured by the simple matter of dialing WE 6-1212. Other cities with this service are Washington, Baltimore, Chicago, Detroit, Boston, and New York.

F. W. Reichelderfer

F. W. REICHELDERFER
Chief of Bureau.

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WEATHER BUREAU

TOPICS

VOL. VIII MARCH 1949 No. 39

IN THIS ISSUE

MERITORIOUS SERVICE AWARDS GO TO 14

Service "of unusual value" to the Bureau and the public by 14 Weather Bureau employees resulted last month in their selection for "meritorious service awards." Ten were from the field. Tangibly, each award consists of a silver medal, lapel emblem, and a certificate, and they are presented under a program authorized by the 79th Congress. The final selections were the result of an elimination process at three levels. Originally, 24 employees were nominated by the Regional Directors, Central Office division chiefs, and project leaders. These were considered by an Employee Awards Committee in the Central Office, and finally by a similar committee of the Department of Commerce.

Since the Awards Program is an entirely new one, the Awards Committee has no previous experience, data, or stated policies to govern it in its deliberations. To avoid cheapening of the awards themselves, the Committee considered only outstanding accomplishment, above and beyond duty requirements, and of such a caliber as to be recognized as outstanding by fellow employees of the person nominated for the award. The Committee tried to avoid sentimental considerations and strictly length-of-service factors. It held that the term "outstanding accomplishment" connotes the initiation and development of something original, as opposed to the successful administration of programs conceived and developed elsewhere. As a final check, the nominees were compared to fellow employees in similar positions, to determine consistency.

Presentation of the awards in Washington was made by Secretary of Commerce Charles Sawyer at a ceremony February 14. In the field the presentations were made at ceremonies arranged by the Regional Offices. The contributions of the employees concerned are described below.

ELMER FISHER

Mr. Fisher, meteorologist at WBO Portland, Oreg., did an outstanding job of flood forecasting in the Columbia River Basin in 1948. During this flood (May, June, and July) the Columbia River reached levels far above those on which forecasting experience was available. Mr. Fisher improvised new methods and extended by his own judgment the "Rating Tables" at key points on the river. The skill with which he rendered these important judgments is evidenced by numerous commendations from public officials and businessmen in the Columbia River Basin area.

EDGAR H. FLETCHER

Mr. Fletcher, OIC at WBO Sacramento, Calif., was nominated on the basis of long service of consistently superior quality. He has been in the Bureau for 37 years and on his own initiative has developed a successful system of specialized forecasting for agricultural interests. He has also made many outstanding river forecasts during critical periods and has developed schemes which have increased the accuracy of these forecasts.

S. D. FLORA

Mr. Flora, OIC at WBO Topeka, Kans., has had more than 46 years experience in Climatological work for the Bureau, and his name is synonymous with the Weather Bureau in any part of the State of Kansas. His most recent accomplishment is the authorship of a book, "Climate of Kansas" which has already received acclaim in scientific circles. This is the first book of its kind covering Kansas climate. It includes a comprehensive digest and discussion of the weather records accumulated through a hundred years or more within the borders of the State. It is considered a permanent contribution to the science of climatology.

LAWRENCE W. FOSKETT

Mr. Foskett, mechanical engineer with the Instrument Division, received an award on the basis of two major contributions. He was nominated originally for his development of the ceilometer, which has been accepted as a distinct improvement over the balloon method of measuring cloud heights. Mr. Foskett pursued the development of the project in the face of considerable odds and adverse criticism. He worked long hours and on week ends without thought of additional compensation. As the result of his efforts, the ceilometer is now used throughout the service. Mr. Foskett was also nominated for his work in connection with the development of the Electronic Flood Routing Machine described below.

GERSHOM K. GREENING

Mr. Greening, OIC at WBO Salt Lake City, Utah, until his death July 31, 1948 (September 1948 Topics), was given a posthumous award. He qualified because of extremely competent performance of official duties over a long period of time. His official work was his greatest interest in life and he was unable to bring himself to give up the more strenuous activities connected with it even after he had developed a serious heart ailment.

ROBERT A. HALVERSON

Mr. Halverson, electronics supervisor at Seattle, Wash., was nominated because of constantly outstanding work and his contributions to the instrumental inspection and maintenance program. He has carried out many original investigations and research activities on his own time and initiative in developing improvements in the design of Bureau equipment, and has developed methods of reducing operating costs. His recommendations have increased the life of many components of equipment from a few hours to several hundred hours, and in two instances has been able to modify old and practically unusable equipment so that it now gives completely satisfactory service. His diagnostic ability enables him to handle many electronic equipment breakdowns by instructing station personnel over long distance telephone, which saves numerous expensive trips.

CARL E. HODSON

Mr. Hodson, now a meteorologist at WBO Houston, Tex., represents the type of employee of which the Bureau is justly proud. During the hurricane season of 1947, when he was an SP-5 meteorological aid, he noted one day the position of a ship which had radioed the first alarming observation in the Gulf of Mexico. He was alone at the station and as an SP-5 could not be expected to recognize that an advisory warning on a hurricane should be issued. However, he realized that such an advisory would be forthcoming shortly and immediately contacted the afternoon newspapers, asking them to hold their presses until the advisory was issued. He called the radio stations and requested that the warning be disseminated at once, even if necessary to break into programs. Mr. Hodson's prompt and decisive action aided in preventing needless exposure to danger, as a weekend was at hand and thousands of persons would normally have been planning excursions to the Gulf shore.

MAX A. KOHLER AND RAY K. LINSLEY, JR.

Mr. Kohler and Mr. Linsley, of the Climatological and Hydrologic Services Division, and Mr. Foskett together developed the Electronic Flood Routing Machine. This machine, considered an outstanding contribution to the science of hydrology, solves the problems of flood routing much more exactly and far more rapidly than the procedures which have been in use heretofore. A pilot model of this electronic device, now thoroughly tested, is demonstrating uses far beyond those originally contemplated for it.

GLENN M. MILLER

Mr. Miller, OIC of the Radiosonde Reconditioning Center at Joliet, Ill., was given an award on the basis of exceptional skill and initiative. He designed and developed the RRC, whose function is that of repairing radiosonde equipment, and has administered it in such a way that it saves the Bureau some $170,000 annually. In accomplishing this, Mr. Miller was required to design and construct the physical layout of the plant, to train personnel, and to place the unit on a production basis.

CHARLES L. MITCHELL

Mr. Mitchell, of the Scientific Services Division, one of the Bureau's early outstanding forcasters, has been with the Bureau since 1904. As early as 1925, Mr. Mitchell demonstrated unusual ability for making accurate and timely forecasts. He possessed rare ability in interpreting weather changes. Subsequently he became principal meteorologist in the Special Forecast Section.

GRADY NORTON

Mr. Norton, OIC of WBO Miami, Fla., has played the leading role in the field portion of the Hurricane Warning Service. Mr. Norton had the personal experience, a number of years ago, of witnessing the terrible loss of life which then accompanied a severe hurricane. The experience made a lasting impression on him and may well account for his zeal in

doing everything possible to reduce loss of life and property through the issuance of accurate and timely hurricane warnings. His service exceeds by far that which is required by his official duties, and can perhaps best be described as that which results from the fullest devotion to his assignment. He is recognized as an outstanding leader in his specialized field of meteorology.

BENJAMIN PARRY

Mr. Parry, OIC at WBO New York until his retirement December 31, served with the Bureau for more than 44 years and was assigned at New York since 1917. The City Office in New York is naturally called upon to render a variety of meteorological services, located as it is so near to the home offices of many commercial interests. The development and improvement of our public service in that area is attributable to Mr. Parry's guidance and leadership. The esteem in which he is held by all who have been associated with him was described in February TOPICS.

LEO E. YOUNG

Mr. Young, electronics supervisor at Atlanta, Ga., was nominated on the basis of his tact, diplomacy, and skill in placing the upper-air observational program of Cuba on its present improved and relatively high plane. Mr. Young, as a subprofessional employee, was detailed in February 1948 to Havana to install new equipment, repair and calibrate old equipment, and train personnel in its use. In addition to the language barrier, Mr. Young had to overcome lack of interest as well. His performance was of a caliber that would have been outstanding even in an employee of higher classification rating.

SPECIAL NEWS AWARD VOTED WEATHERMAN

Although weather news in Omaha, Nebr., did not rate among the "ten biggest local stories of 1948" in the opinion of editors and reporters of the Omaha WORLD-HERALD, the newsmen felt that their local weatherman merited special recognition. Commented the WORLD-HERALD on January 2, "Those taking part in the poll broke a precedent by voting for the first time a special award. It went to Weatherman E. F. Stapowich. The consensus: Mr. Stapowich is sometimes right, sometimes wrong, but is always interesting."

This award came as the result of the special attention Mr. Stapowich has given to service to the public and cooperation with the press since taking over as OIC at WBO Omaha in June 1948. "We have obtained in the last several months many excellent stories of great interest and high value to our weather-conscious readership," wrote the managing editor of the newspaper to Mr. Stapowich. "These stories were beyond what I would believe to be the routine of Weather Bureau service. The hundreds of thousands who read the WORLD-HERALD each day doubtless feel very grateful to the Omaha Weather Bureau. I know this to be true because a good many of our customers have expressed their appreciation of the service rendered through our columns."

Not only does Mr. Stapowich suggest stories and develop interesting facts for stories about the weather, but he assists newsmen in preparing graphic presentations of weather situations to provide simplified explanations for the public. To this work he brings several years experience. As principal assistant at the New York City Office for 4 years he spent most of his time in relations with press associations, newspapers, radio stations and networks, and television stations. In addition he had close contact with many weekly and monthly magazines, advertising agencies, and businesses which use factual weather data. Other experience includes 15 years at WBAS Buffalo, N. Y., (3 years as OIC) where he entered the Bureau in 1929.

SUGGESTION SAVES BUREAU $6500

Theodore Kogon, head of the Materiel Unit of the Anchorage Regional Office, developed in 1948 a means of saving the Bureau more than $6500 annually in transportation charges, and has been awarded $200 under the Employee Suggestion Program. Formerly all radiosonde instruments and batteries were shipped by railway express to Seattle, transferred to a ship for Anchorage, and then reshipped by railway express to the stations themselves. Now, as the result of Mr. Kogon's suggestion, such equipment is flown by air freight from the manufacturing plant direct to Anchorage. The instruments and batteries are then sent by air to the stations.

Results of the change include definite monetary savings; more direct and swifter service to Alaskan stations, permitting them to maintain a smaller supply of instruments; less aging of instruments; elimination of rough handling of delicate instruments in rail–boat shipments; and elimination of possible tie-up as the result of a west coast boat strike.

EMPLOYEE WINS METEOROLOGICAL AWARD

Paul A. Humphrey, meteorologist in the Scientific Services Division, of the Central Office, was presented the Robert M. Losey Award by the Institute of the Aeronautical Sciences at their Honor Night banquet in Hotel Astor, New York, January 25, 1949. This award was given "in recognition of outstanding contributions to the science of meteorology as applied to aeronautics."

Mr. Humphrey's home is in Memphis, Tenn., and he received most of his education in that city. He entered the Weather Bureau in 1939 as an observer at the Nashville, Tenn., Airport, and has served at Joliet, Ill., and St. Paul, Minn. His formal meteorological training was obtained at the University of Chicago during 1941-42.

During the war, while serving with the Navy as aerological officer, he participated in many hazardous weather reconnaissance flights. His outstanding work was in the development of typhoon reconaissance, and he was principally responsible for the Navy aerological publication, TYPHOON WEATHER RECONNAISSANCE, containing his drawing of typhoon

structure. As a Navy aerological officer, he also served as a member of the meteorological staff at the atomic bomb tests at Bikini in 1946. After his return to the Weather Bureau in 1946, he was a member of the Synoptic Reports and Forecast Division. In 1947 he was assigned to Colonel B. G. Holzman, USAF, in connection with the second atomic bomb tests at Eniwetok. During these tests he was responsible for the scientific meteorological observations.

At present he is on detail to the Air Force where he is completing the meteorological section of the final report of the atomic tests.

MAP PLOTTING SUGGESTION ADOPTED

A second suggestion by Lucius W. Dye of the Climatological and Hydrologic Services Division, submitted under the Employee Suggestion Program, has been adopted by the Bureau. An award of $30 was made to Mr. Dye for his proposal that the map plotting aid entitled "Airway Code Tables" be reproduced in quantity and issued to all airway stations for assistance in plotting maps from the airway code. It was estimated that the savings in time resulting from the use of the tables would amount to approximately $600 per year.

A previous suggestion by Mr. Dye (October 1948 TOPICS) brought him a certificate of award.

LENGTH OF SERVICE RECOGNIZED

Nearly a fourth of the Bureau's employees had 10 or more years service on December 31, 1948. This was brought out in February with the announcement of length-of-service awards for 1077 employees. The awards, consisting of a lapel emblem or pin, are presented for the completion of 10, 20, 30, 40, and 50 years of service in the Department of Commerce. Of the 1077 employees concerned, two had been with the Bureau for 50 years. Forty men had completed 40 years; 144 employees had passed the 30-year mark; and 427 had served 20.

Eugene D. Emigh, OIC at Montgomery, Ala., and Frank E. McLeary, OIC at Toledo, Ohio, were the two half-century men. Mr. Emigh retired December 31, so Mr. McLeary is now the sole remaining employee with more than 50 years in the Bureau. Interestingly enough, only two other Government employees in the Department of Commerce (both in the Patent Office), received the 50-year award.

Employees with 40 years or more were all male. In the Central Office there were six: R. H. Weightman, Chief of the Station Facilities and Meteorological Observations Division; William Weber, Chief of the Administrative Services Division; Charles L. Mitchell of the Scientific Services Division; Dahl Baxter and Thomas Patrick of the Administrative Services Division; and Roy N. Covert of SF&MO Division.

In Region I the 40-year men included: Regional Director W. J. Moxom; Frank H. Ahearn, WBO Philadelphia; Mark T. Nesmith, WBO Boston; Benjamin Parry, OIC New York WBO (now retired); Stanley S. Schworm, OIC Richmond WBO; William H. Tracy, OIC Boston WBO; and Ralph C. West, OIC Scranton WBO.

Region II has five men with four decades in the Bureau: Walter J. Bennett, OIC Jacksonville WBO; Paul Hess, OIC Wilmington WBO; John E. Lockwood, OIC Charleston WBO; Gerald C. Merchant, OIC Columbia WBO; and Regional Director T. R. Reed.

The largest number of 40-year employees is in Region III, where 9 such men are stationed. These include Regional Director V. E. Jakl; J. Cecil Alter, OIC Cincinnati WBO; Harry G. Carter, OIC Duluth WBO; John B. Harris (now retired), printer at Louisville: Edward W. Holcomb OIC Springfield, Ill., WBO; Martin R. Hovde, OIC Minneapolis WBO; Paul E. Johnson, OIC Grand Rapids WBO; George W. Mindling, OIC Columbus WBO; and Bernard B. Whittier, OIC Fort Wayne WBO.

In Region IV only two men qualified for the award: Andrew M. Hamrick, OIC Dallas WBO, and Percy J. Naughton, OIC Galveston WBO.

Seven men were contributed to the group by Region V: Homer W. Ball, St. Louis FAWS; Ray A. Dyke, OIC Lincoln WBO; S. D. Flora, OIC Topeka WBO; Edwin B. Gittings, OIC Denver WBO; Bernard R. Laskowski, OIC Huron WBO; Harry F. Walgren, OIC St. Louis WBO; and Will L. Wyland, OIC Sheridan WBO.

Regions VI and VII each had but one 40-year man; Dean Blake, OIC San Diego WBO, and J. C. Smith, Regional Director of Region VII.

DENVER MAN RECEIVES AWARD

Thomas B. Canaday, Jr., forecaster at WBAS Denver, has been awarded $25 under the Employee Suggestion Program. As a result of Mr. Canaday's efforts and ingenuity in developing the station intercommunication system described in January TOPICS, the Bureau will save over $280 a year and station efficiency has been greatly improved. The award was based on both the monetary savings and the improved operation of the station which resulted from Mr. Canaday's ideas.

WEATHERMEN CARRY ON DESPITE STORMS

During January the West experienced some of its worst blizzard weather in history. But weathermen in most cases trudged to work as usual. Wind-packed drifts, gale-driven snow which cut and froze exposed flesh, long hours without relief on a minimum of food and sleep, and frigid nights and days in offices which could not be kept above freezing despite stoves, were some of the difficulties they faced in carrying on their duties.

At Cheyenne, Wyo., during the storm of January 2–4, drifts stopped all traffic and the only possible way to commute between the office and employees' residences was to walk. "It is fortunate," reports OIC A. R. Lowery, "that the Weather Bureau Office at Cheyenne is not several miles from the city like a number of other airport stations. With the visibility zero or near zero, along with the snow, low temperature, and wind, walking a mile is an enormous task!" All employees spent long hours at the office, and Forecaster William J. Denney stayed at the airport 2 days after his car stalled in the snow.

MAROONED FOUR DAYS

OIC F. H. McNally at Rapid City, S. Dak., reports that 12 people—Weather Bureau, CAA, and airline employees—were "marooned" for several days. Some were stranded from the evening of January 2, the others from the following morning. They slept on tables and floors. Food was the greatest problem. Canned goods to last 2 or 3 people several days had been laid in several months before, but 12 made careful rationing necessary. Drinking water came from melted snow. By the morning of the 5th all food was gone. Late that afternoon 3 of the men made their way across the field to the Air Force Base and returned with a supply of combat rations. The group was "liberated" near noon of the 6th.

At Scottsbluff, Nebr,, Lon Daharsh, CAA Communicator, remained on duty alone for more than 30 hours during which the weather was constantly zero-zero with winds 35–50 m. p. h. He missed no observations, although constant digging was necessary to get into the instrument shelter because of snow drifting over it. The temperature in the office reached 27° and a soft drink bottle froze only 12 feet from a heater which was going full blast and functioning perfectly.

EIGHTY-MILE WINDS

The West Coast also got its share of weather. T. W. Rule, Western Area Training Officer, reports being snowed in for 2 days at Sandburg, Calif. "Zero-zero conditions, with gusts as high as 80 m. p. h., were encountered. The office and living quarters must be solidly constructed as no vibration was felt during the storm, while the garage flapped and banged as though it might take off like a bird at any moment from the mountain top!"

Blue Canyon, likewise, after an unprecedented ice storm, had gusts of wind up to 80 m. p. h. "The building groaned and twisted in agony until the wind gave up trying to roll it over the field. So much Donner Summit air blew in through the walls that no heat came from the register, and for 2 days the temperature on the attached thermometer ranged from 28° to 35°!"

Missouri experienced a severe ice storm early in January. C. C. Williford, OIC at Springfield, describes conditions at Bolivar, about 30 miles north of Springfield. "I've seen many ice storms, but never have I seen such utter desolation as I witnessed in Bolivar . . . Many streets are still impassable with a tangled mass of wire and trees across them. Main Street does not have a single telephone or power pole left standing—every way you look there is nothing but a tangled mass of ice-covered wires, smashed and felled trees and shrubbery!"

HAM RADIO UTILIZED

William N. Becker, airway observer at Burwell, Nebr., during a period when telephone lines were down, turned to his amateur radio facilities. He transmitted weather reports to another "ham" operator at Grand Island, who in turn relayed them to the Weather Bureau for long line

transmission. Mr. Becker was also asked by Western Union to handle telegraphic messages from Grand Island to Burwell, and for a period of several days his equipment was the only communication in and out of town.

In the Great Plains area comparison of the first January storm with the famous "Blizzard of '88" was inevitable, although difficult. R. A. Dyke, OIC at Lincoln, Nebr., told a group of survivers of the early blizzard that in strength of wind, amount of snow, and duration of weather conditions, the 1949 blizzard was the worst that had ever visited western Nebraska. Temperatures did not, however, drop as low as in some other storms. Hilmer A. Crumrine, at Omaha, dug up similar information. The Blizzard of '88 was more severe in loss of life, and its scope was far greater, covering most of the United States east of the Rockies and south to the Gulf. M. V. Robins, retired former OIC at Omaha, who was a small boy in South Dakota at the time, recalled that one of the most striking features of the storm was the extreme fineness of the snow which made breathing difficult. This caused the death of many animals through suffocation.

LETTERS OF APPRECIATION

Whatever hardships our weathermen underwent in carrying on with their jobs, they were at least partially compensated by appreciation such as that expressed by a Wyoming rancher in a letter to the OIC at Cheyenne. "I am writing this personal letter to thank you for your assistance not only in reporting the last storm, but for all the other times you have given me storm warnings. This is indeed a great help to me in operating my ranch and I certainly appreciate it. When you called me Sunday morning I took my sheep to the north since you reported a northwest wind, and when the storm struck the sheep came right for the ranch. The only loss I had was two head of ewe lambs."

ALASKAN TECHNICIAN KILLED IN CRASH

Stanley B. Hillman, supervising electronic technician for Region VIII, was killed January 20 when the Alaskan Airlines DC-3 in which he was riding crashed near Homer, Alaska. Mr. Hillman, for the second time in 2 days, was attempting to fly into Bethel to service the radiosonde equipment there. Weather conditions had prevented landing at Bethel on both days, and the aircraft was returning to Anchorage after taking off from Homer, a Kanai Peninsula town.

Forty years old at the time of his death, Mr. Hillman had entered the Bureau in March 1940 as a junior observer at Juneau. He had operated his own electrical repair shop in Yakima, Wash., for 7 years prior to this time and his interests soon took him into radiosonde work. BOREALIS BRIEFS, Region VIII newsletter, pays him this tribute:

> An excellent technician, devoted to his work, Stan, in his quiet way acquired a host of friends in Region VIII. With remarkable patience he solved the most knotty problems of maintenance, but found time after long hours of duty to lend a practiced hand to restore someone's radio to operating condition. Our station activity reports give testimony to the excellence of his work and to the warm friendliness that greeted him at every station.

Mr. Hillman leaves a widow and one daughter.

WALES OIC MAKES MERCY FLIGHT

A B-24 pilot during the war, OIC James W. Brooks of Wales, Alaska, found his flying experience valuable in January in the rescue of an Eskimo who had spent 17 days on an Arctic ice floe. The native, Gregory Ayac, was found near the village of Shishmaref on the northwest coast of Seward Peninsula, with his feet frozen. With two companions he had been hunting on the ice near King Island when the floe broke off and they were swept out to sea. The two others died of exposure, but Ayac finally made his way to shore after drifting nearly 500 miles. Mr. Brooks, at Wales, was notified of the man's plight and after wiring Marks Air Force Base at Nome, picked up Ayac in his own plane and flew him to Nome for hospitalization. Mr. Brooks was officially commended by Regional Director Glen Jefferson for his part in the rescue.

MOBILE, ALA., OIC RETIRES

Frank T. Cole, Official in Charge at WBO Mobile, Ala., since 1932, retired February 28 after nearly 39 years in the Bureau. He was 70 years old just eight days before retirement. He entered the Bureau at the Central Office in May 1910, served as assistant at Lexington, Ky., Reading, Pa., and Drexel, Nebr., then became OIC of the kite station at Leesburg, Ga. Following this assignment he was OIC at Due West, S. C., (another kite station) for several years, and taught meteorology in Erskine College there. For a brief period he was at Spartanburg, S. C., and then took charge at Mobile, where he remained until retirement. He was a member of several professional societies, including the American Meteorological Society, Alabama Academy of Science, Southern Institute of Science and Industry, and the Engineer Club of Mobile.

Mr. Cole's present address is 562 Tuttle Avenue, Mobile 19, Ala.

TOPEKA TOPS RECORD FOR TWO OIC'S

The record of two Officials in Charge during a period of 57 years at Havre, Mont. (published in January TOPICS), has been topped by Topeka, Kans. We are informed by S. D. Flora, OIC at WBO Topeka, that that office was opened originally on June 1, 1887 by T. B. Jennings. Mr. Flora succeeded Mr. Jennings in the summer of 1917 and has been on the job ever since. This is a period of nearly 62 years with only two OIC's. It will be exactly that number at the end of May when Mr. Flora plans to retire.

If this record is exceeded at any station the Central Office would be interested.

KEEPING UP WITH FACSIMILE

In the August 1948 issue of TOPICS an article appeared describing the Bureau's use of facsimile. Since that time, development of this medium

of communication has continued. The following schedule of facsimile transmission on Air Weather Service circuits indicates the extent to which facsimile is currently being used. These are regular transmissions from the WBAN Analysis Center reaching all receivers on the Air Weather Service network, on which the Weather Bureau has several drops.

Winds Aloft

21Z, at 0020, 0040, and 0100 GMT.
03Z, at 0600, 0620, and 0640 GMT.
09Z, at 1220, 1240, and 1300 GMT.
15Z, at 1800, 1820, and 1840 GMT.

Raobs

03Z raobs at 0700 and 0720 GMT.
03Z raob analysis chart at 0740 GMT.
15Z raobs at 1900 and 1920 GMT.
15Z raob analysis chart at 2000 GMT.

Surface Analyses

0030Z, at 0320, 0440, and 0500 GMT.
0630Z, at 0920 GMT.
1230Z, at 1520, 1620, and 1640 GMT.
1830Z, at 2120 GMT.
Atlantic (eastern circuits): 1830Z, at 0120 GMT; 0630Z, at 1340 GMT.
Pacific (western circuits): 1830Z, at 0120 GMT; 0630Z, at 1340 GMT.

Constant Pressure Charts

850 Mb: 03Z, at 0820 GMT; 15Z, at 2020 GMT.
700 Mb: 03Z, at 0840 and 0940 GMT; 15Z, at 2040 and 2100 GMT.
500 Mb: 03Z, at 1000 and 1020 GMT; 15Z, at 2140 and 2200 GMT.
300 Mb: 03Z, at 1040 GMT; 15Z, at 2220 GMT.
200 Mb: 03Z, at 1100 GMT; 15Z, at 2240 GMT.

Prognostic Charts

30-hour surface and 36-hour 700 Mb. at 1140 and 2340 GMT.
54-hour surface at 1320 GMT.
300 Mb., at 0000, 0540, 1200, and 1740 GMT.

Forecasts

6-day (Tuesday and Friday only), at 1540 and 1600 GMT.

The Weather Bureau circuit at San Francisco has been in operation for almost 4 years now and has demonstrated its value. However, the machines have been used regularly during that time, and are wearing out. Maintenance is becoming a serious problem since the nearest company technician is in New York. This problem of upkeep and repair is one that must be solved before facsimile can be widely used by the Bureau.

The Weather Bureau facsimile circuits in the New York area connect La Guardia, Idlewild, the City Office, and Newark. Applications for other drops on this circuit are pending.

A radio facsimile installation has been completed by the Bureau at Chicago and appears to serve as a satisfactory substitute for manual delivery of duplicated maps to the Municipal Airport. Some mechanical difficulties were encountered during the first 2 months of operation, but these have been corrected. The installation has, for the most part,

come up to expectations with regard to speed, legibility, simplicity, and dependability. The equipment at Chicago transmits an 8½x11½ picture in 90 seconds, and operates with a continuous paper feed. Phasing at the receiving machine is automatic. At present only the City Office and the FAWS and briefing airport offices of the Weather Bureau are on this circuit. Future tests will determine the feasibility of extending the system to more remote locations and to other recipients within range of the present transmitter.

At the present time the Weather Bureau is also arranging for tests of map transmission by FM broadcast stations, including one project which is expected to involve retransmission by FM of maps received by facsimile landline channels.

LOUISVILLE OIC RETIRES

With more than 39 years of continuous Weather Bureau service behind him, Ellwood E. Unger, Official in Charge at WBO Louisville, Ky. since 1943, retired February 28, 1949. He entered the Bureau January 26, 1910, at New Orleans, La., as an assistant observer at the age of 28, and in his subsequent career was Official in Charge at four stations, other than Louisville—Taylor, Tex.; Wausau, Wis.; Meridian, Miss.; and Evansville, Ind. Other assignments included Columbia, Mo., and Davenport and Charles City, Iowa. Service at these stations gave him wide experience in river forecasting and climatological work.

Mr. Unger's address is Indiana Hy. No. 261, Route No. 2, Box 58, Boonville, Ind.

CAA COUNSEL RULES ON "REMARKS"

The importance of accurate and complete "remarks" appended to the standard groups of an airway weather report was recently stressed in a ruling by the General Counsel of the Civil Aeronautics Administration. The air carriers had inquired about the "remarks" section as it applies to any modification in the main body of the report, particularly with regard to compliance with Civil Air Regulations related to aircraft minimums. The General Counsel ruled that "the meteorological situation described in the main body of the official weather report represents the general condition. The purpose of the 'remarks' section is to particularize, when appropriate, any of the elements in the main body. The proper approach to the problem, it appears to us, is to determine from 'remarks' the extent to which it actually changes the corresponding item appearing in the main body." He also stated that the "remarks" section is considered to be just as binding as any other portion of the report.

The ruling of the General Counsel points up the necessity of using the latitude afforded by "remarks" to report non-uniform conditions, since the main body of the observation is so highly formalized that only uniform conditions can be accurately reported in it.

DOCUMENT ON BUREAU ACTIVITIES RELEASED

A document, "Weather Bureau Activities" has been compiled for internal use by the Bureau, and one copy is being furnished each field station through the appropriate Regional Office. It is hoped that it will fill a two-fold purpose; first, for the indoctrination of new employees in the scope and extent of the Bureau's program; and second, for use of field officials when discussing the various weather services with interested persons or groups.

While distribution will be limited to one copy per station, officials are authorized to use this information in any normal public contacts. Items may be extracted as desired, for use in newspaper releases, radio talks, or other activities properly pursued in imparting public information, but the document will not be referenced to the public by name, as it cannot be made available for general distribution.

PUBLICATIONS DISTRIBUTED

"Atmospheric Turbulence," a synopsis of the lectures delivered at the Central Office in October and November 1948 by Professor O. G. Sutton of England, has been mailed to all forecast offices. These excellent lectures by this outstanding authority on the subject were attended by a large group from the Weather Bureau and other scientific organizations. This synopsis provides an opportunity for those who were unable to attend the lectures to review the present state of knowledge of atmospheric turbulence and diffusion and to study the investigations and conclusions made by Professor Sutton and his colleagues.

The following publications have also been distributed to field offices:

On Forecasting the Direction of Movement of Winter Cyclones, by Wayne C. Palmer, reprinted from the Monthly Weather Review for September 1948; mailed to research forecasters and District Forecast Centers.

Meteorological Papers Vol. No. 1, Studies of Large Scale Vertical Motions of the Atmosphere, by James E. Miller, published by New York University; mailed to all forecast offices.

NACA Technical Note 1793, Investigations of Meteorological Conditions Associated With Aircraft Icing in Layer Type Clouds for the 1947–48 Winter, by Dwight B. Kline; mailed to all forecast offices.

MORE "ALUMNI" ADDRESSES

A policy of publishing the names and latest available addresses of our "alumni" was announced in February TOPICS. In that issue we listed employees who had retired in 1948. Below are those who left active duty during 1947 and 1946. The addresses are the latest available to the Central Office; any corrections would be appreciated.

RETIREMENTS IN 1947

Howard B. Cowdrick, RDF 5, Napoleon, Ohio.
Warren B. Ent, 297 Euclid Ave., Brookville, Pa.
George J. Glover, 1008 Kenyon St. NW., Washington, D. C.
Owen T. Lay, 3304 West Lawrence Ave., Chicago, Ill.
Loren P. Leech, 2441 34th Ave., West, Seattle 99, Wash.

Richard O. Morelock, Sams Valley P. O., Via Gold Hill, Oreg.
John J. Murphy, c/o WBO Norfolk 10, Va.
Clinton E. Norquest, 522 Calmada Ave., Whittier, Calif.
Thomas E. Reed, Willow Point, RFD 1, Box 197, Vestal, N. Y.
Mark H. Stanley, 2648 East Villa St., Pasadena, Calif.
Sadie C. Ward, 323 Longfellow St. NW., Washington, D. C.
Abe Wiesner, 20 Court St., Canfield, Ohio.
Robert M. Williamson, 1005 Graybar Lane, Nashville 4, Tenn.

RETIREMENTS IN 1946

Charles A. Belt, 1057 Woodlow St., Pittsburgh, Pa.
Charles N. Bemis, Union Village, Vt.
William S. Brotzman, RD 2, Worthington, Pa.
Warren E. Brown, 1604 Q St. NW., Washington, D. C.
Willard E. Dickinson, Pleasant Valley, Conn.
Lawrence C. Fisher, 3212 West Viewmont Way, Seattle 99, Wash.
Clemmy C. Hamme, 417 East Chase St., Baltimore 2, Md.
Lamar E. Harper, 2119 H St. NW., Washington 7, D. C.
Perry R. Hill, 1372 Lake Washington Bldg. S., Seattle 44, Wash.
Everett H. Hughes, 5318 Colorado Ave. NW., Washington 11, D. C.
Nellie A. Hurd, 1913 Park Road NW., Washington, D. C.
Alvin M. Jones, 138 Fayetteville Road, Decatur, Ga.
Harry D. Loflond, 3922 Wilda Ave., Oakland, Calif.
Valentine T. Mayer, 128 6th St. SE., Washington, D. C.
John W. McAntire, 2551 17th St. NW., Washington 9, D. C.
Joseph P. McAuliffe, Box 428B, Bandera, Tex.
Philip G. McGinnis, 438 Lawn Ridge Ave. SE., Huron, S. Dak.
John Peplusky, 817 10th St. NE., Washington, D. C.
Leon F. Paladee, 4845 Converse St., Los Angeles 32, Calif.
Horace L. Pugh, 1902 Wingfield Circle, Jackson 52, Miss.
A. W. Shilling, 310 South Tabor St., North Platte, Nebr.
Annie E. Small, 415 Franklin St. NE., Washington 17, D. C.
Thaddeus S. Stone, Gables Trailer Park, 825 SW. 44th Ave., Miami 34, Fla.
Miles M. Wyland, 9709 Hillhaven, P. O. Box 565, Tujunga, Calif.

SPRINGFIELD PRINTER RETIRES

Ivan L. Sackett, printer at Springfield, Ill., retired January 31, after 26 years in the Bureau, all in the Springfield office. A veteran of the first World War, Mr. Sackett entered the Weather Bureau in January 1923 following several years of printing work in private plants and newspapers. "I can unqualifiedly say," once wrote the OIC at Springfield, "that in my broad experience in the Weather Bureau, Mr. Sackett is far and wide the best printer, both in regard to speed and quality of work, with whom I have ever come in contact." In addition, Mr. Sackett voluntarily took an active interest in station operation and administration, assisting the Official in Charge "not only in instruction and guidance where needed of the more recently appointed personnel on the station, but in being alert to detect any station development that might require administrative attention."

Mr. Sackett's address is 1505 West Gourna St., Springfield, Ill.

FEW HITCHES NOTED IN IMO CHANGES

Seldom has the Weather Bureau been faced with such a difficult task as that involved in making effective the revised observation instructions and new codes and procedures adopted by the IMO Conference of Directors in Washington in 1947. Although more than a year elapsed between the Conference and the deadline date of January 1, 1949, most of this time was taken up with obtaining international and regional concurrence in certain details. Revision and printing of codes and instructions had to be accomplished in the short remaining time. The Printing and Drafting Sections of the Central Office worked overtime, but field personnel still had only a limited period for study of the new instructions and codes.

Despite these handicaps, the changeover was made with practically no confusion, and credit for this accomplishment goes to observers, map plotters, and others concerned. In a recent report, H. W. Reynolds, head of the Mobile Unit of Region V, remarks:

In connection with the inauguration of the Synoptic Code (1949 Edition) an extensive and detailed monitoring program was carried on during the week of January 3–7, 1949.

Reports from all synoptic reporting stations in Region V were closely monitored and entries compared with instructions contained in the new code book. Out of several hundred reports monitored, only 33 errors were noted, most of which were of a minor nature. Errors were progressively less from one observation to the next. Observers were notified of errors by use of Form 3069 with references to paragraphs of instructions.

During the first week in January the entire region was experiencing some of the worst weather of recent years. In spite of this fact, all observers made an excellent showing and response in inauguration of the new code. In view of the above, it is suggested that all observers are deserving of commendation. Considering their limitations, second order stations made an exceptionally good showing.

The excellence of the new code and the concise and comprehensive instructions in the new code book were undoubtedly major factors in the ease with which the change in codes was made. Only favorable comments were heard from all types and grades of employees at WBAS Kansas City.

A monitoring program was also carried on at the Central Office and the SR&F Division reports that the good showing made by Region V is typical of observer performance in other areas. Some errors were noted, but not many more on an average than when the former code was in effect.

NOT "KNOTS PER HOUR"

Wind speeds expressed in terms of nautical miles per hour are properly referred to as "knots." When wind speed only is meant, "knots" should be used; "knots per hour" refers to acceleration, a usage as rare in the Weather Bureau as miles per hour per hour.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

(WB—3-14-49—725)

WEATHER BUREAU

TOPICS

VOL. VIII APRIL 1949 NO. 40

IN THIS ISSUE

WEATHER FOR THE ATOM-SPLITTERS

Even atomic scientists worry about the weather, a quantity as yet beyond their control. Nor has the Atomic Era left the Weather Bureau unaffected. Two Weather Bureau Offices have been set up exclusively to fulfill the needs of the United States Atomic Energy Commission, to help with isobars where isotopes won't work. The stations are at Upton, N. Y., and Oak Ridge, Tenn.—the latter station maintained through funds supplied by the AEC.

The Upton Weather Bureau Office, working in close connection with Brookhaven National Laboratory, is engaged in varied activities which are quite different from the usual tasks of a Weather Bureau Office. Research in the diffusion processes in the lower atmosphere, for which unequalled facilities exist at Brookhaven, is an example.

FORECASTING DIFFUSION

Technical and material assistance is also given to the Laboratory's Meteorology Group in measuring and forecasting diffusion conditions. Once operation of the Brookhaven reactor begins, this information will be used by the scientists of the Nuclear Reactor Project in the following way: As ordinary air, used for cooling, passes through a nuclear reactor, some of the air's argon becomes radioactive. Radioactive argon has a "half-life" of 110 minutes, which means that its radioactivity is halved in slightly less than 2 hours. After cooling the reactor, the air will be returned to the atmosphere via a 300-foot stack. Through the use of the most exact available knowledge of atmospheric diffusion conditions, the waste gases will be released only during periods favorable for rapid dispersion.

Meteorological and climatological advice is rendered to the Office of New York Operations of the Atomic Energy Commission, the coordinating office for Brookhaven as well as for a number of plants which keep the atomic furnaces, laboratories and processing centers supplied with vital supplies and equipment. The problem may be a climatological study of a site being considered for a new installation, or the meteorological factors entering into the design of gaseous waste disposal facilities, or recommendations for most effective "health-physics" monitoring, which means seeing that radioactivity is maintained well below safe levels.

The Weather Bureau was first asked to propose a meteorological program for Brookhaven in January 1947, and has since maintained personnel at that site. The official in charge at Upton is Raymond C. Wanta, a pioneer worker in this field, having been assigned to the Brookhaven project since its origin. With Mr. Wanta in the Weather Bureau group are Matthew Lefkowitz and Albert J. Belfour.

USES IN OAK RIDGE PLANNING

Participation of the Weather Bureau at Oak Ridge is of more recent origin. Many meteorological factors had been considered and studied in every stage of planning, construction, and operation of the three huge

atomic plants there. However, in mid-1948 the Atomic Energy Commission asked the Bureau to undertake a thorough investigation of micrometeorological conditions over the 100 miles of washboard-like terrain comprising the Oak Ridge reservation. This study will help the AEC in planning future construction as to suitable location with respect to the air-flow and also effective gaseous waste disposal systems. It will also give indications as to how health-physics monitoring can be most effectively employed, and may lead to revisions of other procedures when they are reexamined in the light of new knowledge in unprecedented detail. And, of course, in a community and industrial center the size of Oak Ridge there are also many of the more familar needs for weather data.

Six men make up the Oak Ridge WBO. They are Joshua Z. Holland (OIC), Robert F. Myers, John C. Holland, Jack W. Tondee, Howard M. Day, and Edward M. Crume, Jr. These men arrived at Oak Ridge during the last half of 1948 from all corners of the United States, after a thorough screening by the FBI and AEC. They already have an intensive program of observations under way, including 3-hourly pibals and surface observations, double-theodolite observations of zero-lift balloons many times throughout each day and night for studying the atmospheric eddies, occasional low-level temperature soundings by means of captive balloons and operation of a micro-network of 11 continuously recording substations. But their instrumentation is not yet complete. Soon to begin are routine low-level soundings, air flow studies with chemical smoke pots, and direct measurements of atmospheric turbulence. After approximately a year of full-scale research along these lines, the permanent meteorological facilities for the Atomic Energy Commission and the community will be decided upon.

OTHER PARTICIPATION

The Oak Ridge WBO also serves in an advisory capacity to the Office of Oak Ridge Operations of the AEC, which supervises, in addition to the Oak Ridge plants, a number of other installations outside the area.

The Weather Bureau, at the request of the U. S. Air Force, also assigned a meteorologist, Paul A. Humphrey, to the recent atomic tests in the Pacific.

This entire program is being carried out under the direction and supervision of Dr. Harry Wexler, Chief of Scientific Services Division.

LOUISVILLE ASSISTANT RETIRES

Joseph F. Jungermann, professional assistant at WBO Louisville, Ky., retired March 31, 1949, with over 37 years of Weather Bureau service. Mr. Jungermann entered the Bureau in April 1912, as an assistant observer at Washington, D. C., to await instructions and assignment to field duty. His first assignment was at Mount Weather, Va., where after a period of several months, he was promoted and transferred to Miami, Fla. His next assignment, in 1915, was Columbia, S. C., where he spent 17 years. He was transferred to Louisville in 1931.

Mr. Jungermann's address is now: c/o Desmond, Plantation City, Box 1140, Ft. Lauderdale, Fla.

WASHINGTON STATE AMENDS MARK TWAIN

No one can say the Washington State Legislature lacks a sense of humor. One of its members during the 1949 season introduced an act "relating to the weather; establishing a State Commission of Weather Control; creating sunshine, dispelling clouds, prohibiting snow, ice or slides upon highways and railroad tracks; prescribing penalties, and amending Mark Twain's dictum about the weather." Following its first reading, in accordance with solemn legislative procedure, the bill was "ordered printed and referred to Committee on Aviation and Airports." The complete text of the bill reads as follows:

Whereas, the weather, in a non-partisan manner, has in the past vitally affected the health, well-being and prosperity of the people of the State of Washington, it is now the declared public policy of this State to set into operation such human and mechanical agencies as may be effective in supervising, controlling and changing the weather.

Be it enacted by the Legislature of the State of Washington.

SECTION 1. There is established in the office of the Governor of the State of Washington a "Washington State Commission for Weather Control" consisting of the Governor as *ex officio* member, and six (6) commissioners, to be elected at the next general election. One (1) commissioner is to be elected from each Congressional District in the manner now provided for the non-partisan election of superior court judges.

SEC. 2. The weather commission shall meet at the state capitol as often as the weather demands and permits, and the Governor shall preside at all meetings, but he shall vote only in case of a tie vote on the part of the commissioners.

SEC. 3. It shall be the duty of the commission: (a) To provide continuous sunshine on week ends, which are declared to begin at noon on each Friday and end at the hour of seven o'clock in the evening on the following Thursday, for the period from May 1st to September 30th annually hereafter.

(b) To regulate at all times temperatures within a distance of not higher than the beginning of the stratospheric belt and located directly above the area comprising the State of Washington, in such manner as to avoid undue precipitation, violent snowstorms, freezing temperatures and any and all conditions of climate which might cause to be deposited rocks, snow, water or other undesirable matter at a depth of more than two (2) inches upon any primary state highway or railroad track or bed: *Provided, however.* That this act shall not be construed to affect in any manner the flow of interstate commerce upon such roads.

(c) To furnish the United States Weather Bureau, or any agency thereof operating within the state, with such forecasts of wind velocities, humidity and precipitation existing in higher realms in order that within the State of Washington flood levels will never be reached by any stream, river, rivulet, or tributary thereof.

SEC. 4. Any person, including corporations, partnerships and other human forms of association, whether the same be organized for profit or not, who shall in any manner interfere with, disturb or criticize the work of the commission, shall be guilty of a gross misdemeanor and shall be punished by a resounding condemnation of the situation.

SEC. 5. Mark Twain's famous dictum is amended by inserting after the word "nobody" the phrase "except the Legislature of the State of Washington."

SEC. 6. The provisions of this act are to be severable, and if any section, subdivision or clause of this act shall be held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of the act.

SEC. 7. This act is necessary for the immediate preservation of the public peace, health and safety, the support of the state government and its existing public institutions, and shall take effect immediately.

FORMER ROSWELL OIC DIES

Cleve Hallenbeck, for 27 years official in charge at Roswell, N. Mex., until his retirement in 1941, died at his home in Roswell February 20. He had been in poor health for a number of years.

Mr. Hallenbeck was widely known in the Southwest for his popular scientific and historical writings. A frequent contributor to the Monthly Weather Review during his Weather Bureau career, he made researches in meteorology and climatology that were unique at the time and are still useful reading today. He was a leading spirit in the development and promotion of the fruit-frost service established around Roswell at one time, and developed local service to a high degree of excellence.

Entering the Bureau in 1907 at Atlanta, he served for varying periods at Pueblo, San Francisco, Los Angeles, Fort Worth, Chicago, Houston, and Denver until 1914 when he took charge at Roswell. In 1920 he was elected Fellow of the American Meteorological Society in recognition of his work. At the time he was the youngest of the AMS Fellows and one of the three west of the Mississippi.

Spanish colonial history of the Southwest was his hobby and he had several books and numerous articles published on the subject. Two more book-length manuscripts are now in the process of publication.

WEATHERMEN OBSERVE VOLCANIC ERUPTION

When Mauna Loa, the Hawaiian volcano, stirred fitfully early in January, the Weather Bureau was on the job to observe its effects on the atmosphere. The Navy had made a plane available for whatever investigations the Bureau wished to conduct, so R. H. Simpson of Honolulu WBO, and C. M. Woffinden and J. R. Gulick of Honolulu WBAS, flew near the erupting volcano.

Aerometeorographs were attached to the wing of the plane and flights were made at levels ranging from 12,000 to 16,000 feet in an attempt to determine the extent to which the eruption had disturbed the atmospheric layers in the vicinity. No noticeable turbulence was encountered at a greater distance than 5 miles from the crater. Conditions were clear, except for scattered stratus beneath the level of the volcano top, and overcast cirro-stratus. Temperatures were unaffected outside of a radius of 5 miles, and no appreciable horizontal temperature variations were recorded at any flight level, either on the traces or from direct readings of the cockpit thermometer.

Mauna Loa was completely capped in snow above 9,000 feet, and this did not seem to be melting rapidly, even within a hundred yards on either side of the lava flow. A spectacular pyrotechnic display was witnessed both day and night.

REPRINTS DISTRIBUTED

The following reprints were distributed in the month of March:

Objective Method for Forecasting Precipitation Amounts from Winter Coastal Storms for Boston, by Samuel Penn, reprinted from, Monthly Weather Review, August 1948. Mailed to research and district forecasters.

Is Forecasting Necessary, by Francis Chichester, from the Journal of the Institute of Navigation (England) vol. 1, No. 4, October 1948. Mailed to all forecast offices.

PUBLIC DOES APPRECIATE GOOD SERVICE

It is axiomatic that one "busted" forecast will draw more public response than a score of perfect ones. But the manner of presentation of weather information does much to form the public's attitude toward our forecasts. A courteous and professional manner on our part will do much to form an understanding attitude on theirs. Recently an oil company official wrote the Chief of Bureau:

Generally speaking, the airways forecasters at Government weather stations are inadequate in presenting flying weather data over the telephone—and in person. They give the appearance of being harassed and reluctant to give information—their voices sound with a tone of annoyance over the telephone—if they even answer the phone.

But on the morning of February 13, at 7:45 a. m., when I made inquiry as to flying weather from Los Angeles to San Francisco, I had a unique experience. On obtaining a prompt answer to my call, a most pleasant voice answered, exuding a personality of assurance and desire to properly perform the duties of a public servant. She—it was a young lady—gave prompt and complete information, couched in language that a pilot understands.

My congratulations on such a representative of your so important department—I only wish this young lady was ever present at all of your stations.

In my work your services are so important—and, believe me, it is most satisfactory to know that you have such people in your organization—rare as their presence might be.

The young lady referred to has been identified as Mrs. Leoni Ayer, meteorological aid at WBAS Burbank. Nor is this the first time pilots have written to the Bureau praising her briefing technique. Because of this she has been asked to describe how she works. Basically, she believes, her success grows out of a strong interest in and enjoyment of her work. But, more specifically, she writes:

First I try to find out how experienced a pilot I am dealing with, by asking him whether any instrument flying will be acceptable. The way he answers that question usually tells me all I need to know. Having established his experience, I brief the pilot accordingly, cautioning a light plane pilot expressly against conditions I merely mention to an experienced pilot flying a large plane, such as strong surface winds, light to moderate turbulence, etc. In all cases I am careful to see that the pilot is aware of and knows the reason for, any non-frontal weather, since too many pilots are prone to look at a map, see no fronts, and conclude—no fronts, no weather. Finally, when the weather along a pilot's preferred route seems poor, I suggest alternate routes, if they appear any better, even if he does not specifically ask for them.

And one thing particularly the pilots do seem to like. When weather conditions are such that a specific forecast may easily prove incorrect, I give him the forecast but add a quick explanation of the situation and warn him that it is a very doubtful one, and that, therefore, the expected weather may not materialize. After all, the pilots know very well that forecasts are not infallible, and they have more confidence in your forecast if a degree of expected accuracy is included. By the same token I do not tell them that the ceiling along a certain route will have a specific value. Rather I give them the current conditions and tell them whether they are expected to hold, improve or deteriorate, and approximately how much.

Just a little extra thoughtfulness pays dividends in public good will, too. Regional Director E. L. Hardy recently received this note of appreciation from an airlines official because Forecaster Harrison S. Manson at Albuquerque gave a pilot better service than was expected:

I want to bring to your attention a little extra service I recently received from the Weather Bureau at Albuquerque. All of the personnel that I have come in contact with have always made every effort to help in any way possible. On this occasion I talked to Mr. Manson shortly after arriving at the field about a situation that was developing in the Oklahoma–Kansas area with regard to expected weather that evening. About 45 minutes later, just before the flight left, Mr. Manson came to the Continental Office looking for me. He brought with him a new chart he had just completed which gave him a better picture of the expected development. He wanted us to be sure and have all the information and assistance available before leaving.

This was certainly beyond the duties normally attendant to his job and was greatly appreciated.

Please convey to Mr. Manson and the others at Albuquerque, our sincere appreciation of the type of service they are extending to us. Our pilots all have high regard for the Albuquerque boys.

SHREVEPORT OIC FOLLOWS TORNADO PATH

From the air, the wake of a tornado has "much the appearance of having been polished with a gigantic buffer and reflects light much like a strip of polished floor," in the words of B. P. Hughes, OIC at Shreveport, La. Mr. Hughes, in a bomber from Barksdale Field, followed the path of destruction left by a January tornado across 125 miles of northern Louisiana and southern Arkansas.

The flight began where the storm ended near Warren, Ark. There, dissipation of the tornado was evidenced by a gradual decrease in felled timber over a distance of 2 miles. The center of the path back to the southwest, where destruction was complete, appeared to be about 100 yards wide, with damage tapering off 2 to 3 hundred yards on each side of the center. "The location of the path was fortunate," remarks Mr. Hughes in a report to the Central Office, "in that 1, 2, or 3 hundred yards to the left could have resulted in a death toll 10 times the 53 reported." Some weaving of the path was noticed.

The path was followed southwest to the origin of the storm near Dixie, La. It was noted that extremely heavy rains must have fallen with the storm, as much water was visible on the ground, and several highways were flooded for short distances. The path of destruction near Warren was about 13 miles long. Damage was next noticed near El Dorado, Ark., about 45 miles southwest. Here the path was short, about 4 miles. It was picked up about 30 miles to the southwest, where some homes had been demolished near Haynesville, La. Approximately 15 miles farther southwest the storm was again evident in a path about 2½ miles long, on the northern edge of Sarepta, La. Finally, 25 miles farther on, near Dixie, La., 2 homes were found unroofed. No more damage was seen west of there.

BUREAU COOPERATES WITH LATIN AMERICA

In years past, activity in the field of meteorology was lacking in many of the Latin American countries. This was brought forcibly to the attention of United States meteorologists early in World War II, when information and service from Latin America became of great importance to our national security. It was then decided that the best method of obtaining long range improvement would be through participation in the program of cooperation with the Latin American Republics. In the ensuing years this took a number of forms.

The Weather Bureau and the Division of Cultural Relations of the Department of State agreed to train a number of young men from countries of the Caribbean region in the study of hurricanes. In 1942 the Bureau gave a 6 month "Hurricane Training Course" at New Orleans, attended by a group of 8 students from Mexico, Guatemala, Nicaragua, Costa Rica, Colombia, Haiti, and the Dominican Republic, Also in that same year arrangements were made with the Mexican Government for the installation of 4 radiosonde stations in Mexico. The United States provides instruments, materials, supplies, and replacement of equipment, and has assigned a technician to Mexico for inspection, servicing of equipment, training of observers, and coordination of operations.

A similar arrangement was made in 1944 with the Cuban Government for installing a radiosonde station at Havana. No technician is assigned there, since it is only occasionally necessary to provide technical advice.

WEATHER SCHOOL OPERATED

An "Inter-American Meteorological School" was operated for 7 months in 1943 by the Weather Bureau, Office of the Coordinator of Inter-American Affairs, Defense Supplies Corporation, and the Division of Cultural Relations. Objectives of the school were to train competent weather observers; stimulate interest in meteorology in the Latin American countries; develop meteorological work in those countries; and encourage the coordination of meteorological methods and procedures throughout the Western Hemisphere.

Responsibility for planning and carrying out this project fell logically upon the Weather Bureau. The city of Medellin, Colombia, was selected as the site for the school because of its relatively convenient location and the necessary facilities available there. The University of Antioquia made quarters available in the building of its School of Law and Political Sciences. A group of Weather Bureau officials selected the students for the course, chose a staff of competent instructors, and arranged for the supply of instruments and materials for the entire program. At the invitation of the Bureau 6 of the meteorological services of Latin America designated one or more of their officials to participate as instructors. The total faculty consisted of 10 Americans and 10 Latin Americans. Twenty countries participated, sending a total of 199 students for the course.

A UNIQUE EVENT

The Inter-American Meteorological School was a unique event in inter-American education. It brought together, for the first time in the history of the Western Hemisphere, student groups from every Latin-

American Republic and gave them a chance to carry out a program of specialized study. The course was a complete success, and the results highly satisfactory. It is clearly evident from subsequent developments that the course stimulated the development of forecasting facilities, the exchange of weather information for the benefit of agriculture, aviation, etc., and greater cooperation in the field meteorology. In addition, it is felt that the work of the school helped to cement relations among meteorologists of the American Republics, as it furnished a forum in which to become well acquainted and to discuss problems common to all.

Near the end of the course 40 outstanding young men were selected from the entire student body to pursue advanced studies in meteorology in the United States under new scholarships awarded to them. An additional group of 6 received modified scholarships to specialize in climatology. Since completion of the course many additional Medellin students have been awarded training grants to pursue advanced studies in meteorology and climatology in the United States.

There have been a number of by-products of the scientific and cultural program. The Weather Bureau has made translations into Spanish of several useful and practical meteorological publications which have been published and disseminated to professionals and students. At the request of the Peruvian Government a meterological consultant has been assigned in Peru to work with a Civil Aeronautics Mission by advising on weather networks, frequency of reports, briefing, instruments, requirements as to codes, etc. Technical information has been furnished to various meteorological services. In 1947 and 1948 climatological surveys were made in the countries around the Caribbean to collect and publish available climatological data on that region.

Bureau participation in the Cooperation with the American Republics Program has been in accordance with the general United States policy of giving assistance in scientific and cultural fields to American Republics. Improvement of the national weather service is considered a stabilizing factor for the economy of any country because of the assistance rendered to aviation, agricultural, and industrial interests. Weather Bureau efforts have helped to create better understanding of the United States through exposure of students to the American way of doing things.

CLOUD MURAL DECORATES WBO WALL

A weather station need not necessarily be drably utilitarian, in the opinion of OIC Richard Splaine of WBO Melbourne, Fla. A little effort can often turn it into a place of beauty. The east end of the Melbourne office was originally bare and unsightly wallboard, which the local airport authorities refused to improve. Lack of funds, as well as legal complications, prevented the Atlanta Regional Office from doing anything about the matter either. Mr. Splaine therefore secured permission to improve the wall himself. So, working in his spare time for several weeks last summer, he completed a large cloud mural covering a considerable portion of the wall, where it now attracts the attention and comment of every visitor.

HOW IS YOUR SUPERVISION TODAY?

A famous philosopher laid down the principle, "know thyself," as a guide to his followers more than 2000 years ago. The principle is as sound today as it was then, but the problem is still how to go about examining oneself. In an effort to help supervisors judge the quality of their own supervision, the Western Area Training Office has developed a "Supervisors' Self-Rating Chart." This check list was first distributed at the Columbia Rason Conference in March 1948 and then later discussed at Region VI Training Conference for Supervisors in Los Angeles in June. The chart follows:

Forcefulness.—Do I give my orders properly and see that they are followed out, maintaining a businesslike attitude constantly? Do I keep in touch with the efforts of my men so that I know how well each is working? Do I preserve the right balance between too much sternness and too much familiarity?

Ability to inspire confidence.—Do I show respect for my men and myself? Am I impartial, or do I play favorites? Do I exercise self-control, or do I allow my temper frequently to get the better of me?

Ability to take a personal interest in the men.—Do I talk with the men as men rather than as inferiors? Do I give them personal training and discuss their work with them? Do I get things for them which they would be unable to without my assistance? Do I help them to realize their ambitions?

Ability to get the work done correctly.—Do I give instructions so clearly that no one can misunderstand what is wanted? Do I check up on my men to see that my orders are followed exactly?

Ability to get and use the ideas of the men.—Am I successful in getting suggestions from the men? Do I use these suggestions when I get them? Do I give credit to the man who gives me an idea, when I am talking about it to my superiors and colleagues?

Ability to be one of the men.—Do I work with them rather than over them?

Ability to lead rather than boss the men.—Do I show the men how they can work more efficiently, rather than ordering them about without showing them how? Do I train them in better methods? Do I set the example by being as hard on myself as I am on any of my subordinates?

Ability to develop teamwork.—Am I careful to plan ahead? Is the mechanical equipment for which I am responsible always ready for work? Do I place the right men in the right positions? Do I allocate the responsibility for results so that my men know what they have to do? Does the spirit of teamwork exist among my men?

Ability to show kindliness without being considered "easy."—Do I remember that my men are human beings and treat them with common courtesy? Do I work for the interests of my men? Do I know how to keep the men from imposing on my good nature? Can I properly balance praise and censure?

Ability to reprimand properly.—Do I always make sure of my case before I reprimand? Do I give reprimands in private, except in unusual cases? Do I reprimand in a straightforward manner, or do I merely nag? Do I give the reasons for my reprimands? Do I follow up the reprimands? Can I reprimand and make him feel that it is fair?

Ability to keep from worrying.—Do I worry too much about myself, my home, or my job?

Ability to delegate work properly.—Do I thrust responsibility on my men, allowing them to make some mistakes? Do I train them on the job so that they can take over work that I ought to give them? Am I willing to delegate work, or do I feel that I want to do everything myself?

Ability to call forth the best efforts of the men.—Can I develop enthusiam in my men? Do I know how to prevent idling and carelessness?

Ability to train men on the job.—Do I know how to analyze a job before teaching it to a beginner? Do I show him carefully how to do it? Do I let him try it while I watch? Do I correct his mistakes? Am I in the habit of keeping my eye on a beginner until he is able to do the job well?

Ability to make a new man feel at home.—Do I introduce the new man to the older men around him? Do I show a personal interest in him? Do I make it easy for him to ask questions? Can I make him enthusiastic about his new job?

Self confidence.—Am I sure of myself on the job, or am I afraid of it? Do I help my subordinate to overcome self conciousness? Do I show him that he is better than he thinks he is?

"ALUMNI" FOR 1944-1945

Continuing the policy, announced in February TOPICS, of publishing the names and addresses of living retired weathermen, there are listed below former employees who retired in 1944 and 1945, The addresses are the latest available to the Central Office, but any corrections would be appreciated:

RETIRED IN 1944

John A. Balster, 5520 Sherrier Place NW., Washington, D. C.
Frederick W. Brist, 1695 Autumn Ave. Memphis, Tenn.
Rose I. Cullen, 1333 Taylor St. NW., Washington, D. C.
Fred M. Graf, 2405 37th St. NW., Washington, D. C.
Richard W. Gray, 415 NW. 19th Ave., Miami, Fla.
William H. Green, 1482 N. First St., Abilene, Texas.
Willis E. Hurd, 3500 22nd St., N. Arlington, Va.
Robert E. Kearney, Devils Lake, N. Dak.
James L. Kendall, R.R. 1, Box 209, Franklin, Ind.
Joseph B. Kincer, 4112 Fessenden St. NW., Washington, D. C.
William D. Lee, 4311 Ellicott St. NW., Washington, D. C.
Herbert Lyman, c/o S. Michelson, 709 G. St. NW., Washington, D. C.
Eric R. Miller, P. O. Box 957, La Jolla, Calif.
George M. Richards, 5515 Nevada Ave. NW., Washington 15, D. C.
Orlin R. Rogers, R.F.D. 1, Columbia, Mo.
Truman G. Shipman, R. F. D. 1, Sunbury, Pa.
Ralph W. Thomas, 1822 W. 53rd St., Erie, Pa.

RETIRED IN 1945

Agnes A. Asher, 253 Market St., Independence, Calif.
Dr. Charles C. Clark, 21 West Irving St., Chevy Chase 15, Md.
Herman T. Collman, 520 North 5th St., St. Joseph, Mo.
Claude C. Cooper, 1211 Columbus Ave., Sandusky, Ohio.
William C. Cox, 2039 New Hampshire Ave. NW., Washington, D. C.
Arthur P. Crichton, Mount Vernon St., Newport, Vt.
John Dailey, 34 Preston Drive, Cranston, R. I.
Howard W. Dickson, 2025 I St. NW., Apt 1126, Washington 6, D. C.
Carl E. Hadley, 720 Mason St., Barry, Ill.
Edgar C. Horton, 1221 North 13th St., Birmingham 4, Ala.
Harris A. Jones, 330 Randolph Ave., Elkins, W. Va.
James M. Jones, 1112 I St., Eureka, Calif.
Adolph Neumann, 947 Cromwell Ave. St. Paul 4, Minn.
G. Harold Noyes, 35 Kingston Road, Newton Highlands 61, Mass.
Clarence J. Root, 193 Moss Ave., Highland Park 3, Mich.
George V. Sager, 220 Pine Ave., Fresno 4, Calif.
Agnes R. Thompson, South Church St., Berryville, Va.
Rose M. Vickers, 514 19th St., NW., Washington 6, D. C.
Edward L. Wells, 3017 NE. 60th Ave., Portland 13, Oreg.

AGENCIES COOPERATE IN KNOXVILLE FLOOD

That cooperation among public service agencies can be effective when there is a will to make it so is shown by the manner in which four different agencies in the Tennessee Valley combined their resources during a flash flood on First Creek at Knoxville, Tenn., November 29, 1948. This emergency is described by Theodore W. Kleinsasser, OIC at Knoxville, in a recent issue of the Region II BREEZE.

In 1944 a record flash flood in First Creek drove 200 Knoxville families out of their homes. Because the last flood in the creek prior to that time had occurred before the development of most of the land subject to flooding, the local Weather Bureau Office had never set up a flood forecasting system for this stream. Consequently, the office was embarrassed when called upon to tell the public how high the water would rise. The American Red Cross and city relief agencies found themselves hopelessly swamped with pleas for help. Confusion resulted when one agency advised evacuation, only to have a second agency advise against it. Homes that should have been evacuated were left stranded, and others that were safe from the flood were emptied needlessly.

RESPONSIBILITIES DISTRIBUTED

Soon after the 1944 flood, representatives of the American Red Cross, City of Knoxville, the local Weather Bureau Office, and the Tennessee Valley Authority set up a plan to define the fields of activity and responsibilities of each agency in event of another flood. Under this plan it was agreed that the Weather Bureau should have sole responsibility for issuing flood warnings and disseminating all stage forecasts made during the flood.

Since the local Weather Bureau Office had no hydraulic engineers available for developing a stage forecasting scheme, and since the TVA did, it was agreed that the actual stage forecasts would be made by the TVA, but be disseminated by the Weather Bureau. It was apparent to the TVA engineers that, to be of any real value, their stage forecasts would have to take into consideration the amount of rain expected over the watershed, as well as amounts already in the ground. The local WBO therefore assumed responsibility for making these quantitative forecasts for the engineers as needed.

The City of Knoxville assumed full responsibility for all evacuation activities. The Red Cross took responsibility for setting up emergency relief stations for any families which might be made homeless by a flood. And the City also agreed to make a survey to determine heights at which various homes and businesses would be affected.

PREPARED FOR STORM

When the 1948 flood came all agencies were prepared. At 4 a. m. November 29, the forecaster on duty at the airport station decided that rain expected to fall over Knoxville during the next 24 hours might bring First Creek out of its banks. On this basis he called the TVA

engineer on duty and requested him to make a check-up and preliminary forecast for the stream. The City Engineer and the Red Cross were also alerted. By 5 a. m. the TVA engineer had secured gage readings and rain reports for the watershed, in addition to a preliminary quantitative precipitation forecast from the Weather Bureau. On the basis of this information he predicted that the stream would exceed flood stage and gave a preliminary estimate of the level it would reach by noon.

The Weather Bureau Office notified the City Engineer, who began evacuation operations in the areas that would be affected first. The local Red Cross, upon notification, immediately began setting up emergency relief stations. Preliminary warnings were broadcast over all local radio stations. Throughout the day, revisions of the stage forecasts, based on observed rain plus additional predicted amounts, were relayed to the City Engineer to enable him to evacuate new areas that would be affected.

The public was kept informed of stream conditions during the day through bulletins broadcast over all local radio stations, the most important ones being handled directly from the Weather Bureau Office. Rumors were thus spiked by official bulletins before they could get started. Evacuation and relief activities were orderly because of close liaison between the Weather Bureau, City Engineer, and Red Cross.

At 3 p. m. crest predictions were issued, even though the rain was expected to continue 18 hours longer. By 4 p. m. evacuation and protection work affecting 80 homes in threatened areas was completed and work crews placed on a standby basis until the danger was over. At 8 p. m. the stream began falling after having risen to within 9 inches of the predicted crest. This information was given to the City Engineer who then released his relief crews. A final bulletin was broadcast at 9 p. m. and all activities in the WBO returned to normal.

PRESIDENT URGES WELFARE SUPPORT

President Harry Truman, in a recent letter to the Heads of Executive Departments and Agencies, urges that Government employees give the same support to local welfare drives for meeting specific situations that they give to the annual Community Chest campaigns. The letter reads in part:

> While the Community Chest drives are usually conducted concurrently in many cities during October, there are some situations in which the same type of federated campaign on behalf of local health and social service agencies is conducted at a different time of year and under a different name. . . . Such federated drives are as deserving of our full support as are the Community Chest campaigns in the fall.
>
> It is, therefore, my desire that the policies expressed in my letter of May 5 (1948) relating to Community Chests be applied to similar federated health and welfare campaigns, whenever conducted and under whatever name. (The May 5 letter urged: I hope that all employes will give generously, keeping in mind the fact that each of the Red Feather services included in the Community Chest would appeal separately if they were not united in this one campaign and that contributors should give enough to support all of these services for a full year).

PLAUDITS FROM A REGIONAL DIRECTOR

In appreciation of the performance of his Region III weathermen during this winter's struggle with the elements, Regional Director V. E. Jakl pays them the following tribute in the March issue of THE BIG THREE, new regional newsletter:

We believe that the Weather Bureau is unique among organizations for the degree of *esprit de corps* among its personnel. The loyalty and patience shown during periods of personnel shortages that have plagued many stations is just one evidence and a long standing one, of that spirit among Weather Bureau employees that we have in mind. More recently, we have had related to us many incidents, in both this and neighboring regions, of devotion to duty and fortitude, that represented the best efforts by our personnel in the battle against the elements. In every instance, we won the battle against the Nemesis that seemed determined to isolate our stations and numb our personnel to inactivity. More power to our rugged men and women, be they standing watch in the wintry blasts of the North Dakota plains, or in the summer sunshine of the Blue Grass State.

ALTER RETIRES AFTER 46 YEARS

With 46 years of service to the Weather Bureau behind him, J. Cecil Alter retired March 31, 1949. At the time of his retirement, he was official in charge at WBO Cincinnati, Ohio. Mr. Alter entered the Bureau June 2, 1902, as an observer at Atlanta, Ga. and transferred to Salt Lake City, Utah in July 1903. Service at the Salt Lake City office totaled 35 years. Mr. Alter also served at Portland, Oreg., and Cheyenne, Wyo., for short periods of time. He had been in charge at Cincinnati since 1941.

Mr. Alter was a member of many scientific organizations, including the Utah Academy of Science; American Pioneer Trails; Utah Historical Society; American Meteorological Society; and American Association for the Advancement of Science. He edited many scientific articles which appeared in such publications as MINES AND METHODS; U. S. DEPARTMENT OF AGRICULTURE YEARBOOK; and ENGINEERING NEWS, N. Y.

MORE PEOPLE WRITING TO CENTRAL OFFICE

The volume of mail received in the Central Office continues to increase year by year, a recent sampling indicates. In a representative period of 28 consecutive working days during early 1949 the actual count of envelopes received showed an increase of 38 percent over a similar period in 1948. The count this year was 37,145 envelopes received in the 28-day period as compared with 26,906 in a 28-day period in 1948. No count was made in 1947, but the sample in 1946 gave 17,068 received.

Outgoing mail was a different story, there being an actual decrease in letters mailed in the 1949 count. In 1948 a total of 4,282 letters—exclusive of mimeographed matter—went out during the 28-day period, while this year the number fell off to 4,116, a decrease of 4 percent.

NEW TYPE BROADCAST ON EAST COAST

An experimental FM network weather broadcast was inaugurated in the northern coastal section of the Middle Atlantic States and southern New England in mid-March. The program coordinates a network broadcast of the general weather picture with local presentation of the local forecast. First, at 4:55 p. m. EST daily Monday through Friday, a 5-minute summary of the general situation is presented from the Central Office broadcast studio to FM stations in Massachusetts, southeastern New York, Connecticut, northern New Jersey, eastern Pennsylvania, Maryland, and northern Virginia. Then, immediately following, the announcer at each station comes on the air with the local forecast supplied by the nearest Weather Bureau Office. The audience for each station is limited because of the use of FM, but the large area covered by the network brings an extensive population within range of the service.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

(WB—4-21-49—725)

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WEATHER BUREAU

TOPICS

VOL. VIII MAY 1949 NO. 41

IN THIS ISSUE

CRANDALL AIDS BROADCASTERS

Although most people listen with much interest to weather broadcasts, probably no one does so more intently than Roy Crandall—he does it for a living. He's the Bureau's new "broadcasting inspector" who monitors radio broadcasts of weathermen at field stations in order to help them improve their technique.

Operating out of the Central Office Training Section, Mr. Crandall usually accompanies a regional field aide to stations doing or contemplating direct weather broadcasts. With a portable AM-FM radio receiver and a magnetic tape recorder he makes recordings of broadcasts. Later these are played back to the men who made them, and Mr. Crandall then points out how they might be improved. Under his coaching, practice broadcasts are also made, with emphasis on proper delivery, distance the speaker should maintain between himself and the microphone, pitch and volume of voice, etc. He also advises on current operational instructions on the making of broadcasts, approved methods and procedures for instituting various types of programs, and the availability of materials, forms, and operational guides for use in broadcasting activities.

Although he has been doing his job only a few months, Mr. Crandall is already quite adept at it. Being blind, he has had considerable experience in analyzing voices, so learning broadcast analysis was comparatively simple. Nor were Bureau procedures a problem, since he has been with the Bureau since 1945. But until last summer he had the sight of his left eye. Originally he had been blinded as the result of an auto accident in 1941. By 1943 his left eye had recovered sufficiently for him to go to work for the Treasury Department's Bureau of Public Debt in Chicago. In 1944 and 1945 he was a "production scheduler and expediter" for a Chicago electrical manufacturing concern. Then came a job in the Materiel Unit of Weather Bureau's Chicago Regional Office. But by last summer his sight had completely failed and it was necessary to find a job which could be done without it. His present position as inspector of broadcasting was the answer.

There were problems to be overcome, of course. How do you tune a radio quickly without seeing the dial? On his portable receiver he glued raised spots on the dial. Learning how to thread the thin, flat metal tape of the recorder was a tough one. The proper side of the tape has to face the recording mechanism. The tapes are manufactured with one side darker than the other, so that a person can see the difference. After experimenting in vain with several tricks, Mr. Crandall accidentally discovered that if his fingers were moist he could somehow feel the difference.

A white cane and no hesitation about asking questions are his chief means of getting about easily. He says the trouble with seeing eye dogs is that they can't read signs. They are not useful enough for his purposes, traveling around as much as he does.

Mr. Crandall is 37, married, and the father of two children.

LASKOWSKI ENTERS RETIREMENT

Bernard R. Laskowski, section director of South Dakota and official in charge at Huron since 1934, retired April 30 with 44 years of service at the age of 60. His decision to give up active duty was the result of the poor health he has suffered for several years.

Mr. Laskowski entered the Bureau May 1, 1905, as a messenger boy (age 16 and just out of high school) at Alpena, Mich. Three years later he transferred to the Central Office for an assignment in the Instrument Division. In 1909 and 1910 he carried on evaporation studies at the Salton Sea Experiment Station at Salt Creek Trestle, Calif. Between 1910 and 1913 he spent varying periods of time at Sacramento, San Francisco, and Baker, Calif., and at Duluth, Green Bay, and Saginaw, Mich. From Saginaw he was assigned for a year to a new experiment station at Wagon Wheel Gap, Colo., for work on determination of the effect of forest covering on runoff and streamflow. From Wagon Wheel Gap he transferred to Phoenix and then Denver. During the spring of 1916 he did fruit-frost work at Delta, Colo., and decided this was where he wanted to live when he retired.

At Denver he enlisted in the National Guard and in June 1916 left with his regiment for the Mexican Border. But not until after the end of World War I, in August 1919, did he return from military furlough. Back on active duty in the Bureau again, he was assigned to Topeka as assistant to S. D. Flora. This assignment at the Kansas Section Center, which lasted 15 years, prepared him for promotion and transfer to Huron as section director in 1934.

At Huron, which serves an area population of nearly 643,000 people, his accomplishments include reporting and interpreting the value of subsoil moisture, supervision of approximately 115 substations, warnings of winter storms for the benefit of rural schools, and close cooperation with other agencies during World War II. "I think Mr. Laskowski's good nature and cheerful cooperativeness deserves more praise than I can find words for," wrote a representative of another agency to the Chief of Bureau.

Through the years he published numerous articles on meteorology in the MONTHLY WEATHER REVIEW, BULLETIN OF THE AMERICAN METEOROLOGICAL SOCIETY, and TYCOS–ROCHESTER. He was elected a fellow of the AMS in 1931 and was assistant editor of the BULLETIN from 1930 to 1932.

Mr. Laskowski was active in civic affairs in Huron and in 1940 was president of the local Federal Business association. He is an enthusiastic pheasant hunter. He and Mrs. Laskowski now make their home at 407 Leon Avenue, Delta, Colo.

JOHN RUSKIN ON THE WEATHER

Perhaps not everyone would agree, but John Ruskin, 19th century English author, art critic, and social reformer, found something good to say about all kinds of weather. A correspondent for the Region VI THUNDERER has brought to our attention these sentiments:

Sunshine is delicious, rain is refreshing, wind braces up, snow is exhilarating; there is no such thing as bad weather, only different kinds of good weather.

OUTSIDE LETTERS OF RECOMMENDATION

Occasionally employees wonder whether letters of recommendation from outside the Bureau would be of assistance in connection with their desires for promotion. The following excerpt from a recent letter by the Chief of Bureau expresses the Bureau's policy on this subject:

Your letter inquires whether it would be helpful for you to get recommendations from your Congressman. Ordinarily, letters of this kind do not add to the information on qualifications and other merits already available to the Central Office through regular Bureau channels. Of course, every employee has the right to solicit whatever letters of recommendation he feels may help him, but this practice has never been encouraged in the Weather Bureau and it is regarded as neither necessary nor justifiable as a general rule.

The regular personnel channels and facilities provide for placing in the personnel records of each employee all of the facts pertaining to personal and technical qualifications together with recommendations by officials in charge through efficiency ratings and other media. Unless a congressman or other political representative has first-hand knowledge of qualifications and services over and above the information available through officials in charge and other direct supervisors of the work of the employee it is unlikely that he can add anything bearing on the merits of the case.

Place yourself in the position of the official who has to make the decision in selecting a candidate for a position. If he earnestly tries to select the best qualified and most deserving employee, all things considered, as most Federal officials try to do and as the Weather Bureau does in all its personnel actions, he will not welcome anything suggesting political influence to decide the case on some basis other than its merits. The Civil Service policy is aimed primarily at eliminating political considerations and basing decision solely on the merit system.

Whenever recommendations are received from political representatives or other prominent and influential officials outside the Bureau, they are given full consideration and effort is made to evaluate their source and justification. But care is also taken to see that such letters of recommendation are not an effort on the part of an employee to take unfair advantage of other eligible candidates by influencing the decision through factors other than individual qualifications and general merit.

RESEARCH FELLOWSHIPS AT IOWA STATE

Two research fellowships in agricultural climatology are available at Iowa State College, at Ames, Iowa. The fellowships are under the direction of the Agricultural Experiment Station, Climatology Subsection, connected with the college, and pay $720 plus tuition for 12 months. Ex-service men may obtain full G. I. benefits.

The work under the fellowships will consist of assisting on experimental and research projects. Usually this can be tied in with thesis work for a graduate degree. Full time course work will be permitted.

Applicants should have a B. S. or equivalent degree, including or supplemented by university meteorological training, such as the "A" course given to Army personnel during the war.

In addition, an interest and aptitude in mathematics is important, because much of the course work will be in statistics. Previous training in agriculture or agronomy, or a farm background, is also required.

The fellowships will be open by July 1. The course work will begin about September 1. Applications, which should include college transcripts and other personal qualifiications should be sent to the Central Office, attention Training Section. No applications received after June 20, 1949, will be considered.

The Weather Bureau will not make a selection among the applicants, but will serve only as a collecting agency for applications, and will perform a preliminary screening for minimum requirements. Applications will then be sent to Iowa State College for actual selection of successful applicants.

GOVERNOR PRAISES PHOENIX WEATHERMEN

In a recent letter to Louis R. Jurwitz, OIC Phoenix WBO, the Governor of Arizona, Dan E. Garvey, pays high tribute to the efforts of Weather Bureau people at Phoenix during the winter snow emergency, when food, hay and other needed supplies were flown to people and livestock isolated by blizzards. Governor Garvey writes:

I am writing this to let you know how deeply I appreciate your cooperation in the recent snow relief emergency in northern Arizona. The people of the State of Arizona owe to you and to those who were associated with you in that enterprise a great debt of gratitude.

During the period of several weeks in which we were paralyzed by the deepest snows, the fiercest blizzards and most prolonged cold in Arizona's recorded history, we should have been almost helpless without the unstinted assistance and good offices of your Bureau and associated agencies.

There was never a time when you and your associates did not heartily respond to every situation and comply with every justifiable request.

I say without reservation that your combined activities and efforts saved many lives, relieved critical hunger among the scores of snowbound, and preserved thousands of head of livestock from starvation and death.

Though hastily organized, it was the finest and most smoothly functioning emergency operation that I have ever seen.

In all its complicated problems and wide ramifications, there was never a hitch. Everything we asked was promptly, expeditiously and effectively fulfilled. You worked without rest, without sleep and sometimes without food through 20 and 24-hour periods. And you did it voluntarily, willingly and without complaint.

You did a swell job from the beginning to the end, and for it you have my heartiest compliments and my deepest respect.

The staffs of the two offices at Phoenix include, besides Mr. Jurwitz, Carl R. Erickson, Robert K. Fankhauser, Mrs. Dorothy C. Harrison, Raymond F. Jones, William L. Sabine, Albert G. Oertel, Wendell F. Shultz, Margaret Allee, Joseph T. Craig, George R. Ellis, Betsy Ann Jenkins, John C. Nyhan, Rue E. Rush, and Raymond W. Williams.

CLEANING THERMOMETERS WITH VINEGAR

From the Region II BREEZE comes a tip on thermometer care. The whitish mineral deposit that sometimes forms on wet bulb thermometers may be sponged off easily with a cloth dampened in vinegar.

DONORA SMOG BEING ANALYZED

Late in October 1948 a peculiar combination of industrial smoke and fog accumulated for approximately 5 days in the Monongahela Valley in the vicinity of the steel and coal mining communities of Donora and Webster, Pa. Twenty deaths were reported as the result of this high concentration of gases and fog, and many additional people became seriously ill. Some of those affected claim they have not yet recovered from the effects of the smoke and fog.

In an effort to prevent a recurrence of the Donora disaster the U. S. Public Health Service was requested by the Pennsylvania State Health Department to investigate this incident. Realizing that the high concentration of industrial gases could occur only with a certain type of weather condition, the Public Health Service asked the Weather Bureau to assist in the Donora investigation.

EXTENSIVE OBSERVATIONS

Accordingly, W. H. Hoecker, Jr., of the Scientific Services Division, assisted by Morris F. Orris and John A. Mayer of the New York Regional Office, was detailed to Donora late in January 1949 to set up eight automatic recording stations in that vicinitv. The Monongahela River approaches Donora from the southwest, and eventually leaves the area toward the northwest after making a large U-shaped bend as it passes the city. One must ascend 400 to 500 feet to reach most of the ridges overlooking this valley. Donora is located at the apex of the U on the western side of the valley from the river's edge to the top of the ridge, and the town of Webster is situated on the east bank of the river in a similar fashion. Meteorological stations were selected so that a cross section of the atmospheric flow through the valley could be obtained. Two stations were placed at the bottom of the valley, one on each side of the river; two were located halfway up each hillside; and one on each ridge. Two additional stations were placed at the sharpest bends of the river north and south of Donora. To complete the cross section, wind records from a cooperative station in the valley are being used. This elevated instrument exposure is approximately halfway between the valley floor and ridge tops, and is also near the center of the valley. Meteorological parameters recorded at all of these stations were wind direction and velocity, temperature, humidity, and rainfall. Three additional thermographs were suitably placed at other locations in standard cotton region shelters to detect night air drainage. In addition, "Smoke Character and Direction" forms were distributed to several industrial plants up and down river from Donora so records might be obtained three times daily of wind direction to eight points, character of stack effluence, visibility based on ability to see hills on opposite sides of the river, etc. These observations, being based on smoke issuing from stacks within sight, considerably extended the scope of the observations. Photographs of two points in the valley were also taken twice daily from a hill top. Cold weather, mud, hand-carrying of heavy equipment long distances due to inaccessibility of the roads, and audiences of inquisitive children were common experiences.

MUCH DATA COLLECTED

The Public Health Service took air samples at specific stations in and around Donora in order to determine concentrations of contaminants. Many simultaneous samples at different points were taken. Weather observations were recorded with each air sample, including wind, relative humidity, turbulance factor, cloudiness, and present weather.

Much meteorological information was collected by the Weather Bureau and comparative information on the magnitude and type of the pollution in the atmosphere by the Public Health Service. Analysis of this data briefly will consist of: A time cross section of all variables, meteorological and chemical, plotted on one strip of paper to detect significant tendencies and differences; velocity and frequency wind roses for all wind stations for 2-week periods; wind flow patterns at synoptic hours to determine any relation between wind flows in the valley and the geostrophic wind flow; up and down valley wind components in a vertical cross section of the valley; comparison of pictures of smoke conditions with the general weather situation as determined by the synoptic charts and RAOBS from Pittsburgh; and cross sections of temperature and relative humidity for interesting days.

The field operations of this project ended late in April, and it is hoped that a preliminary combined Public Health Service-Weather Bureau report will be ready by mid-summer. The project may be resumed next fall if necessary.

SUPERVISOR KEY TO HUMAN RELATIONS

Supervisors can make or break a program of human relations. This was the theme of an address delivered by Harry A. Bullis, chairman of the board of directors of General Mills, Inc., before the Congress of American Industry at New York recently. Not only does an employee get his first and often his most lasting impression of an organization through his supervison during his first few days on his job, but the supervisor will be the most important continuing influence on his attitude. Mr. Bullis continues:

A good supervisor understands the motivating forces behind human behavior. He will know that Joe is worried over a sick child, or over a wife who is spending too much. He can handle Joe accordingly on the job, sympathetically and skillfully.

We can prevent breakdowns of machines and motors because we know the danger signals. A doctor can predict heart conditions and other ailments from symptoms. By the same token, an alert supervisor can see when an interruption or bad attitude is developing in his working force. If he senses trouble, he can prevent a major upheaval, or the loss of good employees, or an increase in costs.

WILLIAM C. COX DIES IN WASHINGTON

William C. Cox, who retired in 1945 after 22 years in the Central Office, died at his home in Washington, D. C., April 23. Mr. Cox, who was 74 at the time of his death, entered the Bureau in 1923 and was a scientific aid with the SR&F Division at retirement. Additional details on his career may be found in the February 1945 TOPICS.

LAST OF RETIRED WEATHERMEN LISTED

Below are the retired weathermen whose names and addresses have not as yet been published in TOPICS. (The addresses are the latest available to the Central Office; any corrections would be appreciated.) More information about these people will appear in future issues of TOPICS, such as their state of health, what they have been doing since retirement, etc.

RETIRED 1932

William J. Barrett, 11-A Orchard St., Revere, Mass.
Daniel F. O'Neil, 3352 18th St. NW., Washington, D. C.
Charles T. Shaffer, L. L. Route, Box 66-A, Elma, Wash.
Thomas R. Taylor, R. R. 2, Box 256A, Hollywood, Fla.
Charles F. Von Hermann, 585 Hardendorf Ave. NE., Atlanta, Ga.

RETIRED 1933

Montello E. Blystone, 517 Colorado Ave., Huron, S. Dak.
Edward A. Brown, care of Lawrence E. Kelly, 2372 National Bank Bldg., Detroit, Mich.
Louis C. Cover, 1617 East Thurston St., Olympia, Wash.
Moselle C. Herndon, 1852 Columbia Rd., Apt. 605, Washington, D. C.
Louis Lodholz, Station S, Box 21, Los Angeles, Calif.
Lawrence L. McWhorter, 2035 N. Meridian St., Indianapolis, Ind.
William W. Neifert, Masonic Home, Charlton, Mass.
Leon G. Sutton, Box 907, Port Angeles, Wash.
Walter W. Thomas, R. D. 2, Lewiston, Idaho.
George B. Wurtz, 1220 Fontaine Road, Lexington, Ky.

RETIRED 1934

William M. Gutridge, 1412 N. Utah St., Arlington, Va.
Samuel Peterson, Box 281, El Paso, Tex.

RETIRED 1935

Dr. Isaac M. Cline, 633 Saint Peter St., New Orleans 16, La.
Elmer Collins, 1711 15th St. NW., Washington, D. C.
Mrs. Lydia M. Crabbs, 827 Yuma St. SE, Washington 20, D. C.
F. Eugene Hartwell, Bolton, Vt.
Julius C. Hayden, 310 Pierce St., San Francisco, Calif.
Dr. William J. Humphreys, Cosmos Club, 1520 H St. NW., Washington, D. C.
Harvey H. Spindler, Orrville, Ohio.

RETIRED 1936

Oscar L. Bailey, 14 N. McDowell St., Raleigh, N. C.
William D. Bancroft, 1137 N. 33d St., Lincoln, Nebr.
Bartholomeo T. Bertetti, 3018 W. Martin St., San Antonio, Tex.
William E. Donaldson, 1913 Park Road NW., Washington, D. C.
Juanita L. Newlon, 620 22nd St. NW., Washington, D. C.
Martin B. Stubbs, 366 N. Erie St., Wichita, Kans.

RETIRED 1937

William H. Alexander, P. O. Box 27, Cumby, Tex.

RETIRED 1938

Joseph Brown, 1340 Wallach Place NW., Washington, D. C.
Miss Genevra B. Diehl, 1430 Rhode Island Ave. NW., Apt. 24, Washington, D. C.
George E. Grimes, 46 Orange St., Nantucket, Mass.

RETIRED 1938.—Cont.

Walter B. Hare, 4334 N. 12th St., Phoenix, Ariz.
Richard Heine, 717 North St., Talladega, Ala.
Ernest K. Lovett, General Delivery, The Dalles, Oreg.
Roscoe Nunn, 215 Orrick Lane, Kirkwood, Mo.

RETIRED 1939

W. S. Belden, 624 North Fifth St., St. Joseph 51, Mo.
Harvey S. Cole, 816 N. Monroe St., Little Rock, Ark.

RETIRED 1940

Joseph L. Cline, 231 West 12th St., Dallas, Tex.
Joseph E. Hissong, 710 Orange St., Santa Maria, Calif.
Hermann E. Hobbs, 9701 Monroe St., Silver Spring, Md.
James H. Spencer, 4813 Trinity Place, Philadelphia, Pa.
Rudolph Washington, 1102 5th St. NE., Washington, D. C.

RETIRED 1941

William E. Barron, 530½ North Union St., Appleton, Wis.
Harold E. Baughman, 360 Diss Road, Palo Alto, Calif.
George S. Bliss, Box 143, Primghar, Ia.
Olin M. Hadley, 1762 Boulevard Drive NE., Atlanta, Ga.
William H. C. Holst, 1211 6th Ave. No., St. Petersburg 6, Fla.

RETIRED 1942

Walter E. Bonnett, 864 Del Monte Blvd., Pacific Grove, Calif.
Mrs Ada Flemming, 2319 Sherman Ave. NW., Washington, D. C.
Merton L. Fuller, R. D. 2, Peoria, Ill.
Joseph M. Kirk, 2107 Country Club Blvd., Ames Iowa.
Robert T. Lindley, 601 Rigby St., Vicksburg, Miss.
William A. Mitchell, Zebulon, Ga,
Ralph C. Mize, R. D. 2 Box 341, Los Gatos, Calif.
Ernest G. Montrop, 2500 K St. NW., Apt. 106, Washington, D. C.
William J. Schnurbusch, Box 602, Brownsville, Tex.
Alfred H. Thiessen, 1618 Arlington Ridge Road, Arlington, Va.
Richard W. Timberlake, 406, 23rd St., Virginia Beach, Va.

RETIRED 1943

John H. Armington, 99 Arlington Ave., Indianapolis 1, Ind.
Thomas A Blair, 426 Marine St., La Jolla, Calif.
Benjamin F. Butler, General Delivery, St. Petersburg, Fla.
Lawrence H. Daingerfield, 615 No. Bedford Drive, Beverly Hills, Calif.
Samuel M. Dudley, 3536 13th St. NW., Washington, D. C.
Leslie G. Gray, care of Mrs. Mildred Grey, 2029 E. Sheridan, Phoenix, Ariz.
Henry C. Gross, 36 St. Charles Place, Shrewsbury, St. Louis, Mo.
Lulu R. Jones, 1112 Eye St., Eureka Calif.
Miss Isabel C. Kiernan, 1613 25th St. SE., Washington, D. C.
Edwin G. Larson, 600 Kelly, Charles City, Iowa.
William T. Lathrop, Box 522, Route 4, Eugene, Oreg.
Fred I. Moses, R. D. 2, Ithaca, N. Y.
Arthur W. Pugh, 6126 Verdun Ave., Los Angeles 43, Calif.
Malcolm Sprague, 115 Kensington Way, San Francisco, Calif.
Bertram C. Ullrich, 525½ N. 6th Street, Keokuk, Iowa.
Fred H. Week, 631 W. Roger Parkway, Duluth, Minn.

In April TOPICS Fred M. Graf was listed as having been retired in 1944. This was an error; Mr. Graf retired in January 1947.

MCLEARY CLOSES UNIQUE CAREER

Few men have spent half a century in the Government service; only four men in the whole Department of Commerce could claim this distinction when the recent length-of-service awards were made by the Department. Fewer men still have spent this length of time at one station. But when the fact is added that more than 49 of these years were worked without vacation or a single day of sick leave, the career becomes unique. That is the record of Frank L. McLeary, official in charge at WBO Toledo for the last 15 years, who retired March 31.

Actually, his Weather Bureau service covered 50 years and 6 months, but 4½ months were spent at Wilmington, N. C. At the time of his retirement he had been with the Bureau the longest of any employee.

Mr. McLeary, who will be 69 on July 1, entered the Bureau as a map distributor at Toledo on October 1, 1898. The only break in his stay at that station was the brief assignment at Wilmington in 1904. His unusual career was described in October 1946 in an article on the back of the Washington Daily Map.

The Toledo station serves an area with a population of more than 600,000, and renders general weather service and special warnings to extensive horticultural, marine, industrial, transportation, and utility interests. The Toledo Chamber of Commerce and county agricultural agents of the area credit Mr. McLeary's advice with saving farmers and businessmen more than a million dollars a year. The city accorded him special recognition in August 1947, when radio station WTOD and the Toledo Chamber of Commerce presented him with the WTOD Achievement Award and the title, "Mr. Toledo of 1947" for "outstanding service to Toledo." Attending the presentation ceremony were the Governor of Ohio, the Mayor of Toledo, and many other officials. At other times he has received numerous expressions of appreciation by the local interests utilizing Weather Bureau information.

In January 1948, for the first time, he was forced to take time off by an attack of sciatica, but within a few weeks was back at work. However, last fall he decided to retire when his 50 years at Toledo was complete. He and Mrs. McLeary will continue to live at 325 Bush Street, Toledo.

WHAT'S YOUR STORY?

What is the story of your station? How did it first become established? How has it served your community down through the years? How have warnings saved lives and money during blizzard or flood? What do local citizens think of "their Weather Bureau"? We'd like you to tell us.

The basic purpose of TOPICS is to keep Bureau people informed about their organization. Some of the information necessary for this purpose originates in the Central Office, or is available from correspondence, reports, regional newsletters, etc. But we know much of the most important story, that of the stations and their place in their communities, escapes us entirely. We'd like to tell it, but the only way we can do that is for you to write the story and send it to us.

The primary requirements are that the material be written in simple, direct language; that it be interesting or significant information rather than just "chit-chat"; and that the story satisfy the "five W's"—what happened, who did it, when it took place, where it occurred, and why.

We'd also like to hear about individual accomplishment, especially where the local public is recognizing a job well done. We'd like the stories of unusual service programs in the community and how local people respond to them. Cooperation with other public agencies and the results likewise make good reading, we want to know how you did it in your community. What were the unusual or difficult aspects of the job which you were required to overcome, and how you did it?

When an employee retires or dies, or when a retired employee dies, we'd like a story from someone who knew him personally. We'd like to hear how Bureau policies affect individual stations or employees.

We can't give by-lines, but we do make every effort to mention names and give credit where credit is due. Our deadline for each issue is the 20th of the previous month, but we want to hear from you at any time. Just send your material to the Central Office, attention TOPICS Desk.

WEATHERMEN ON MISSION TO GREECE

Two Weather Bureau meteorologists, Norman R. Hagen and James M. Beall, have been assigned to work with a technical advisory mission which the Civil Aeronautics Administration, under the auspices of the Economic Cooperation Administration, has sent to Greece. Mr. Beall and the 13 CAA specialists in the group left for Athens by air late in April. Mr. Hagen, who is meteorological attache with the U. S. Embassy in London, will continue to operate out of that city.

Purpose of the mission is to help the Greek Government get civil aviation on its feet in Greece. The specialists will assist the Greek Government in establishing new facilities and services, and in improving those now in existence. They will procure, upon request of the Greek Government, equipment and spare parts needed. They will assist in training Greek personnel. And they will render whatever general advice and assistance is necessary, looking forward to a time when external assistance will no longer be necessary. The group is responsible to the chief of the ECA mission in Athens on policy matters. It is estimated the project will take about a year.

Mr. Hagen, formerly overseas director of the European-African Hypo Program, will act as meteorological consultant to the head of the CAA mission. He will be available only on a part-time basis, however, continuing his duties as meteorological attache in London.

On the spot in Athens as a full-time meteorological advisor will be Mr. Beall. Under Mr. Hagen's general supervision, his work will be to determine requirements for meteorological equipment and personnel, develop a training program in airway forecasting and upper-air analysis, and act as advisor to the Chief of Mission in Mr. Hagen's absence. Prior to this assignment, Mr. Beall was airway forecast supervisor of WBO Billings, Mont. In the winter of 1948 he accompanied a Navy expedition to the Antarctic.

MARK TWAIN DID NOT SAY IT!

We who make weather our business know how frequently writers and speakers, as well as everyday conversationalists, quote the saying, "Everybody talks about the weather but nobody does anything about it." Usually the statement is attributed to Mark Twain. Others have pointed out, however, that the quotation originated not with Mark Twain but with Charles Dudley Warner, associate editor of the Hartford (Conn.) COURANT.

Because the question of authorship is so frequently raised, W. R. Fuller, official in charge of the Weather Bureau Office at Hartford, was asked to ascertain the facts as accurately as possible. The substance of his report is as follows:

Cyril Clemens, Mark Twain's nephew and president of The International Mark Twain Society, tracked down the quotation and found that it was first used by Charles Dudley Warner in an editorial in the HARTFORD COURANT in 1890. From old letters and conversations with older employees, the HARTFORD COURANT can cite plenty of authority that these "immortal words" came from Warner.

While a search of the HARTFORD COURANT issues during the year 1890 failed to turn up such an editorial, there is an editorial in the issue of Aug. 24, 1897 in which the subject quotation was used as the lead-off line discussing the unpleasant weather of that summer in which there was a predominance of rain and very little sunshine. It may very well be that this latter editorial was the one referred to as some time back in the 1890's and the date was erroneously noted as 1890 instead of 1897.

Mark Twain was an intimate friend of Charles Dudley Warner, and they collaborated in the writing of "The Gilded Age."

Although Twain did not author this often-quoted remark, he was not by any means silent on the subject. New England weather, in particular, was a frequent target. Two of his better known comments are:

If you don't like New England's weather you've got to wait a minute.

There is a sumptuous variety about New England weather that compels the stranger's admiration—and regret . . . . In the spring I have counted 136 different kinds of weather inside of 24 hours.

WBO MADISON ON WISCONSIN CAMPUS

Madison, the capital of Wisconsin and a famous summer resort because of its climate, lakes, and scenery, has a population of over 67,000 (1940 census), but also serves a rural population of about the same number. Factories in and near the city produce a variety of manufactures—boots and shoes, agricultural implements, flour, electrical machinery, art glass, rennet extract, horse collar pads, and many others. The city is also noted for its educational institutions, chief of which is the University of Wisconsin.

One of the well known features of the University campus since 1904 has been the Weather Bureau Office on the fourth floor of North Hall. From the beginning an important part of the station's work has been in cooperation with university activities. From 1908 until 1944 when he retired, Eric R. Miller was in charge, and his occupancy of the office was fruitful of much work in solar radiation, temperature and wind studies, resurrection and reconstruction of pre-Weather Bureau records,

and similar projects. For many years Mr. Miller taught the only meteorology courses available at the University, aside from some climatology in the Geography Department.

Since February 1948 the program at Madison has been under the leadership of Lothar Joos. The present status of Bureau service there is described by Mr. Joos in a recent report intended to (1) present to the Central and Regional Offices an account of what has been done, and (2) "summarize the situation in my own mind so as to clarify my thoughts as to our present position and the future activities of this office."

STATIONS COOPERATE

An airport station at Truax Field, 7 miles northeast of the university, has been established since 1939, but the city office coordinates the general weather service for the community. Primary responsibility for local forecasting during the business day is assumed by the city office, which issues daytime forecasts for newspapers, radio stations, and the general public. However, a large part of the general public looks to the airport station, under Walter C. Williamson, because the city office is closed evenings, Sundays, and national holidays. Service to pilots is of course the basic program of the airport station, but close cooperation is maintained between the two offices.

Each of the two offices makes three direct radio broadcasts per day, with the airport station carrying the whole load when the city office is closed. Emergency warnings are issued to radio stations so as to get immediate and widespread dissemination. By much use of radio, the warning service has been streamlined so that the need for telephoning general warnings to individuals or operators of small businesses has almost been eliminated. Telephoned warnings are mainly reserved for those whose business may affect the welfare of many people. After radio stations, warnings go to public utilities, governmental units for highway maintenance, transportation companies, and communication systems.

SERVICE TO AGRICULTURE

An agricultural forecast specially tailored to the needs of growers and canning factories is put out during the three important times of planting, dusting (with insecticides), and harvesting. This forecast now receives almost statewide distribution by radio from the city office. Wisconsin canning factories are rapidly adopting the use of temperature records in controlling planting and harvesting schedules for peas and corn.

The 30-day outlook, first released last summer, has been received favorably by experiment station workers. During the present winter, an experimental heating degree day forecast, based on the 30-day outlook, was released to fuel dealers and heating engineers.

At the city office, Mr. Joos is assisted by Rupert J. Batz. At the airport station Mr. Williamson's staff includes Harold J. Evans, George Blandino, Allen L. Eagles, George A. Rothfuss, and Richard H. Volz.

WEATHER DATA SAVES HIGHWAY MONEY

Weather records are an important aid in the operation of the Georgia Federal aid highway system, an article in the Region II BREEZE tells us. When heavy rains or floods damage one of these highways it is up to the U. S. Public Roads Administration to determine whether Federal funds can be used for repair. This agency must base its decision on data furnished by the Weather Bureau, because Federal funds can be used for this purpose only if the damage was caused by natural disturbances "of extraordinary intensity and extent."

In one fairly recent instance alone the Bureau's records saved the Federal government an estimated $75,000 to $125,000. The Georgia State Highway Department on October 20, 1947, notified the Public Roads Administration of its intent to file application for Federal Emergency Relief funds for repair and reconstruction of highways and bridges in Georgia. This damage had resulted from the extremely heavy rains and the tropical hurricanes of September and October 1947. A study by the PRA of climatological data furnished by the Georgia Section Center at Atlanta revealed however, that previous rains for the damaged area had been much heavier than any during the period in question. Upon being advised by the PRA that the weather records would not support the State position, the latter filed no claim for flood damage.

On a subsequent occasion, during the torrential rains of March 31 and April 1 and 2, 1948, rains did cause floods "of extraordinary intensity and extent" in parts of southern Georgia. In this case the weather records revealed just what areas were entitled to Federal aid in repairing road and bridge damage. Approximately $1,500,000 of damage was done, of which the Federal Government has agreed to stand half.

The State of Georgia also uses these same weather records in its dealings with private contractors. The State Highway Department has ruled that in case of flood or rain damage the contractor must repair all damage at his own expense unless the damage "results from unavoidable natural causes such as cloudbursts, etc., that cause high water exceeding all records." In the latter case the State will reimburse him.

In all these cases it is the facts which determine the situation and the Weather Bureau can furnish the facts.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

(WB—5-27-49—800)

WEATHER BUREAU

TOPICS

VOL. IX JUNE 1949 NO. 42

IN THIS ISSUE

EUREKA GETS ITS GROCERIES

Out of the station journal of Eureka Sound, our farthest north station at nearly 80 degrees north, comes a story of "routine" operations that should make the rest of us shiver in our temperate zone tracks. The weather on October 31, 1948 was overcast and "very warm," with a blizzard of wet snow blowing in from the southeast. A plane bringing supplies and mail had been expected for 3 days and a constant watch was being maintained for it. This day, however, it seemed apparent that no flight could be made, so the watch at the airstrip was to be discontinued.

At 10:30 a. m., Murray Dean, one of the Canadian members of the station staff, left the main camp in a "weasel" to pick up Raymond R. Roszek from his post in the Jamesway house at the airstrip 5 miles away. Enroute the storm blew up worse, and visibility became so restricted and perspective so uncertain that he lost his bearings three times. Once, picking his way across the plateau on which the airstrip is located, Dean thought he had the airstrip shack in sight. He could even see Roszek walking toward him. A moment later he had all but crushed the "shack" under the weasel. It was actually one of the oil drums lining the runway, and "Roszek" was one of the runway lights. This drum and light established his position, but within 30 seconds he was lost again. Getting out of the vehicle to reconnoiter, he found he was driving at right angles to the airstrip toward nearby Blacktop Mountain. He returned to the light, set a course down the west side of the runway and reached the shack a few minutes later. The two men made the return trip without incident, as the storm had then become less furious.

PLANE DID COME

The clock read 12:15 p. m. when they arrived. At 12:35, word was received from Resolute Bay that the plane was on its way to Eureka. Contact was made with the craft by radio to secure the information that its estimated time of arrival was 20 minutes later. Although no one thought the plane could make a landing, they hastily loaded the weasel and rushed to the airstrip. Within a few minutes Roszek and Gabriel LeBlanc had the lights going, Lawrence Neilsen was ready on the transmitter, Chesney E. Twombly had prepared "a most discouraging weather report," and Dean and James Morton had the shack warmed up again. By this time they could hear the plane overhead, and received word from Eric Walker at the main base that although the pilot thought he was directly overhead he could see nothing on the ground. The visibility was actually not more than $\frac{1}{8}$ mile most of the time, and the weathermen told the plane this again and again, attempting to dissuade the pilot from what seemed a foolhardy venture in landing. Finally the plane lost enough altitude for the pilot to report seeing the lights, and shortly afterward made a perfect landing.

Stopping only to greet E. E. Goodale, from the Central Office, and Constable Harry Aime of the RCMP, the men hastily unloaded the plane so that it could take off quickly. A last minute Resolute Bay weather report was shouted up to the pilot, a Captain Brunnemar, as the engines were being primed. The ceiling at Resolute was a scant 400 feet and an aircraft flying there an hour before had been forced to return to Crystal 2 without landing. The news did not seem to worry Brunnemar, who took his four-engined craft off from less than half the runway. Back in the airstrip shack the weathermen were unanimous that he was "either one of the best pilots in the world or one darn fool."

RETURN BLOCKED THAT DAY

The fresh meat and eggs from the plane having been loaded on the cargo sled, the men turned off the stove, packed up the radio, turned off the lights and climbed back aboard the weasel to start for the base. The storm had resumed in all its fury, however, and the day was completely dark. Within 300 yards the group was quite lost. Realizing the futility of attempting to continue, they turned back to the shack with Twombly leading the way on foot with a flashlight, and prepared to wait out the storm.

Three small bags of mail had been brought, containing letters and parcels postmarked August. This they read while waiting. Then, with one man on watch for an hour and a half at a time to start the weasel's engine whenever it became cold, they slept fitfully until 4:45 a. m. the next morning. By then the wind had died down and they all returned to the station.

GALVESTON OIC ENDS 43 YEARS SERVICE

As much as any city in the world Galveston, Tex., has reason to be weather conscious. It was there that one of the worst disasters in history occurred, the West Indian hurricane of September 1900 which drove a wall of water over the city, taking 6000 lives and destroying $17,000,000 in property. The people of Galveston built a seawall to prevent recurrence of such a disaster, but they and everyone along the Gulf coast are acutely aware of the importance of storm warnings and forecasts. WBO Galveston supervises a network of 12 small craft and storm warning display stations in the 6 coastal counties of Texas. Less spectacular but also important is the general weather service rendered to truck and dairy farmers, chemical plants, public utilities, fishing and marine interests, beach activities, etc.

Responsible for leadership in this program for the past 5 years has been Percy J. Naughton who retired May 31 after 43 years with the Bureau. Born in Los Angles, Calif., in 1888, Mr. Naughton was educated in Ireland, at Presentation Bros. College and the Civil Service Academy, both in the city of Cork. Returning to this country, he entered the Weather Bureau in 1906 as a messenger at Albany, N. Y. A term at Vicksburg, Miss., followed this, and then 2 years as OIC at Port Arthur, Tex. A 14-year period as first assistant at Jacksonville, Fla. and 9 years as first assistant at New Orleans followed. He transferred to Galveston as OIC in 1944.

SELECTION OF OFFICIALS IN CHARGE

The Weather Bureau can never be stronger than its station programs. Therefore, each station must have progressive, broad-gage leadership if the weather service is to reach the highest possible level of accomplishment within available means. Wherever the local program is deficient in its approved mission, the Bureau and the public both suffer. This is particularly true of stations commissioned to render public service of general or specialized type, because for the public concerned, that station *is* the Weather Bureau, and our whole organization is judged on the local performance. The selection of officials for local leadership therefore becomes a problem of special importance for the Bureau, and great care must be used in assigning officials in charge of stations.

The Central Office in every case tries to follow the principle of selecting the man best fitted for each new assignment as OIC, without influence by personal or political considerations. The Bureau has been free for many years from interference of a political nature in this connection. Whenever an OIC position becomes vacant the entire panel of eligible candidates is first carefully reviewed, taking into account such considerations as broad experience, qualities of leadership, formal training, etc. The names of the employees highest on the panel —usually 5 or 10—are furnished for consideration of project leaders, and the final selection is made from this group.

If the qualifications of the first assistant at the station concerned are equivalent to those of other candidates, his name is included in the list, but he is not given special consideration because of his residence in the place at which the vacancy exists. Only in exceptional circumstances is it the practice to appoint the first assistant as permanent successor to an OIC when the latter is transferred or retired. To do this as a rule would be manifestly unfair to other qualified employees. Frequently, the best qualified candidate is an employee at a larger station already in the grade of the job to be filled. In other cases the experience gained and capacity demonstrated as an OIC at a smaller station has decisive importance in making the final selection.

We believe this policy serves not only the best interests of the Bureau, but also those of employees who aspire to such positions. If automatic succession to command were followed for every first assistant there would be a stagnation in opportunity and an unfair barrier to other employees of equal or higher qualifications who through no fault of their own had not been assigned to this type of position. The opportunity to serve as first assistant is in itself an advantage in working toward a position as official in charge, but most often the next step should be by transfer to become OIC at another station, usually of smaller size, where the qualities of independent leadership can be shown.

In an organization made up of small, widely scattered offices, the opportunity for advancement and personal development in any one office is usually limited. Only through a variety of experience does an employee develop into the type of official needed to represent the Bureau in progressively more important stations.

SUPERVISORY QUALITIES RATED

Skill in training subordinates, in planning the daily workload, and in making assignments and delegating duties are the three qualities considered most essential to good supervision, a majority of 874 supervisors in 52 government and business organizations in the Philadelphia area believe. This was brought out in a recent survey of 14 federal or military and 38 industrial establishments, conducted by the Federal Personnel Council of Philadelphia. The organizations concerned varied from less than 500 to more than 10,000 employees. Other supervisory qualities were ranked by the group as follows:

Skill in analyzing workers as to their capabilities and weaknesses.
Skill in developing teamwork among subordinates.
Skill in exercising authority and meriting respect.
Skill in improving job methods.
A knowledge of the organization's rules and regulations.
Skill in all operations of the unit.
Skill in maintaining records and making reports to supervisors.
Skill in evaluating results of operations.
Skill in recognizing and dealing with emotional disturbances that affect production.
Skill in rating employees.
Skill in planning future operations.
Skill in selecting personnel.
Skill in encouraging workers to grow in service.
A knowledge of the organization's standards of production.
A knowledge of related operations to the unit supervised.
Skill in conducting group discussions.
A knowledge of the organization's promotion policy.
A knowledge of health and safety practices.
A knowledge of the organization's plan for handling grievances.
A knowledge of the organization's employment procedure.
A knowledge of the organization's wage administration plan.
A knowledge of the organization's health and recreation services.

OIC READING WBO RETIRES

Charles S. Ling, for 11 years official in charge at Reading, Pa., retired May 31. Since 1938 Mr. Ling has led a general weather service program for a local area population of 175,000, including special forecasts for fruit growers, shippers, manufacturers, utilities, and others. In addition, Reading is a river district center issuing forecasts and flood warnings to a district with an annual flood damage of about $200,000. Mr. Ling, who served the Bureau more than 36 years, joined it in 1912 as an assistant observer at Montgomery, Ala., moving within a few months to Mt. Weather, Va. In 1915 he moved west to the kite station at Drexel, Nebr., and in 1920 to Ellendale, N. Dak., also a kite station. From 1923 to 1926 he was OIC at Drexel. For several months during 1926 he was in charge of the Weather Bureau exhibit at the sesquicentennial exposition at Philadelphia. His course then took him back west to Pomona, Calif., for fruit frost work under Floyd D. Young. From 1927 until 1938 he was in charge at Harrisburg, Pa., going from there to Reading. Mr. Ling's address is 1506 Dauphin Avenue, Reading, Pa.

S. D. FLORA HAS A BIRTHDAY

Because of a law which says a man must retire from the Government when he reaches the age of 70, the "grand old man" of Kansas weather is today just plain S. D. ("Frosty") Flora of 1276 Tyler Street, Topeka, Kans. Mr. Flora's 70th birthday arrived May 17, so on May 31 he cut his official ties with the Kansas climate and weather with which he has been so intimately concerned for nearly 44 years. In October 1905 he first reported for duty at Topeka from Vicksburg, Miss., where he had spent the preceding 3 years. His only other assignment had been 2 months in the Central Office immediately following his appointment in September 1902.

It was not long before his boss, T. B. Jennings, who had been OIC at Topeka since establishment of the station in 1887, recognized Mr. Flora as the "the most capable assistant I've had in 40 years." Within a few years the climatological and river work of the station was completely his responsibility, and was to be his primary interest during the rest of his career. In 1917 he was made official in charge.

WBO Topeka today furnishes general weather service to a local area population of 100,000, and is an important climatological center and a river district center of outstanding importance and difficulty.

River forecasting at the station is particularly difficult because of the simultaneous flooding of several streams and the short time limit for forecast dissemination due to the rapid rise to flood crest caused by the quick run-off characteristics of the local terrain. The river district includes 7 river systems extending into Colorado and Nebraska, covering a drainage area of 61,000 square miles.

Through the years Mr. Flora's investigations into the various aspects of Kansas weather and climate have resulted in a large number of articles in the MONTHLY WEATHER REVIEW, TYCOS-ROCHESTER, and other publications on tornadoes, hail, electrical storms, drought and similar subjects. One of his special interests was the Kansas "twisters" which people persist in calling "cyclones," and he has collected a large library of pictures of tornadoes in action. The culmination of his life work was the publication last year of his book, "The Climate of Kansas," for which he was given a meritorious service award.

Annually, from 1918 to the present, the Kansas State Board of Agriculture has appointed him its honorary meteorologist, and in 1944 an article in LIFE called him the "'favorite author' of almost all Kansans." His daily radio broadcasts were always popular. Because of his knowledge of farm activities, progress of crops, and the seasonal effect of weather on farm operations he could talk the language of his listeners. The broadcasts were daily chats with his neighbors.

Mr. Flora plans an extensive automobile trip this summer with Mrs. Flora, to the East coast and back, then to Canada and the West coast, returning to Topeka for the winter to continue his writing.

IDLEWILD TELEPHONES REGISTER CALLS

The telephone hook-up between the Weather Bureau briefing and observing unit at New York International Airport (Idlewild) and the airline dispatch offices on the field makes it possible for one man to service the airlines even when other duties, such as taking observations, take him away from the office at frequent intervals.

Six international airline operators have private lines to the weather office, each terminating in a hang-up handset equipped with a retractile cord and mounted at the weather sequence display board. A buzzer, common to all lines, furnishes an audible signal on incoming calls. However, a line lamp of the beehive type is associated with each line and mounted on the wall above the sequence display board. Whenever a call comes in, a relay signal control operates to feed the 110-volt commercial power required to light the line lamp associated with the telephone line. If the man on duty cannot answer when the phone rings the lamp remains lighted, even after the ringing ceases, until he picks up the phone and answers the call.

Two of the airline operators have installations similar to those at the weather station. When a call is made to either of these offices, the mere lifting of the handset from the switch hook causes an automatic ring and the illumination of a retaining light. Push buttons are provided for ringing the other private lines.

The system as a whole is extremely flexible and can be modified to meet various requirements of the users. Each airline contracts and is billed for its own private line service by the telephone company.

AWARD MADE TO SEATTLE GIRL

A suggestion that file numbers be assigned to Multiple Address Letters and Memoranda at the point of issuance recently brought a $15 award to Miss Erba Lynn Post of WBAS Seattle. Previously, file numbers had been affixed in the Central Office only in the case of Circular Letters. Miss Post's suggestion saves the time of field people by making it unnessary for each station to analyze the instruction for filing.

"JACK" DAVIS ISN'T REALLY RETIRING

Like most weathermen, Robert R. "Jack" Davis feels he'll never really leave the Bureau, even though he retired May 31. "It's in my blood. A bolt of lightning or a clap of thunder means something to me it couldn't mean to the average man," he told a reporter for the Amarillo (Tex.) GLOBE, which featured him recently upon receipt of his 20-year service pin. Actually, he has been with the Bureau for more than 22 years, all of them at Amarillo. He is well known in that city for his long service as one of the local weathermen. He entered the Bureau in 1926 as a minor observer after having grown up in Amarillo. Ill health finally forced him to retire. He lives at 710 North Buchanan Street, Amarillo, Tex.

A STACK OF WORK AT WRPC'S!

Can you imagine all Weather Bureau records and punched cards for one year stacked into one pile? At the end of a year of operation the officials in charge of the WRPC's began to get such a picture. For the year 1948, the WRPC's checked, processed, and microfilmed enough original weather records to make a stack of paper over 2000 feet high, weighing 43 tons. This does not include raob records which are handled by the Central Office RAVU and which will make a stack almost 400 feet high weighing 4 tons. Nor do these figures include any duplicate or carbon copies of records.

In addition to the manuscript records, the WRPC's checked and processed more than 8½ million punched cards during 1948. These punched cards, when piled together, will make a stack more than 5000 feet high, weighing about 23 tons. Altogether, then, the WRPC's handled records and punched cards which would create a stack of records over 1¼ miles high, weighing about 66 tons. And that's a stack of work!

PUBLISHED MATERIAL

The WRPC's now check and process the data and prepare copy for printing 42 CLIMATOLOGICAL DATA bulletins. In addition to combining the former HYDROLOGIC BULLETIN with CLIMATOLOGICAL DATA, by adopting more flexible procedures for the bulletin layout, the number of daily precipitation stations carried in the bulletin has been increased from 6563 a year ago to 9822 as of today, and the number of temperature stations carried in the bulletin has been increased from 2377 a year to 4646 as of today. These figures do not include an additional 2500 hourly precipitation stations. The average number of pages contained in all 42 CLIMATOLOGICAL DATA bulletins each year is estimated to be 10,000, and the average number of individual figures contained in all bulletins for a year is estimated to be 53,000,000.

Before the end of 1949, the WRPC program will be in full operation including the preparation of special punched card summaries for stations, pilot balloon resultants, and radiosonde summaries, the printing of Forms 1001 C, station annuals, etc. Most of these phases of work are already partially implemented by some of the WRPC's.

SPECIAL PROJECTS

Probably one of the most important and valuable results of WRPC activity is least generally recognized. At the end of each year the cards, which have been produced at Weather Bureau stations and which have been checked and processed by the WRPC's to meet current needs, are shipped to the New Orleans Tabulation Unit where they are used over and over in project work. Already special projects requested by business, industry, agriculture, and the military are being accomplished with 1948 punched cards. Many of these projects are done on a cost-fee basis, where the requestor pays to the U. S. Treasurer the cost of the project, thus relieving the tax-paying public of the necessity of bearing the expense of tabulating data for a special interest.

Here are just a few of the requests involving 1948 cards punched by the stations. The Dupont Company requested percentage of hours between 7 a. m. and 4 p. m. on week days during which either rain, snow, or freezing temperatures were recorded at cities where their plants are located. This tabulation was needed, the company explained, to analyze their last year's window washing schedules so that plans could be made for more efficient and economical schedules. The Air Force requested frequency distribution of wind direction by wind speed groups for one station to be used in analyzing a runway layout problem. The Atomic Energy Commission requested a frequency distribution of cloud types by amount and height for a research project. Requests for the purchase of reproduced decks of 1948 punched cards for one or more stations for use in research work have come from Consolidated-Edison Corporation, New York; Utilities Research Commission of Chicago; American Airlines; St. Louis University; and others. As the length of record on punched cards grows, plans are being made to use the cards more and more in research projects, and in the preparation of climatological aids to forecasters. By actual tests and comparison of results with those of other countries, the Weather Bureau's procedure of punching cards on the station and machine checking them in the WRPC's is resulting in the most flexible, most reliable, and most error-free deck of weather punched cards in the world. It is with this deck of punched cards in the years to come that the Weather Bureau hopes to solve many problems in climatology, weather forecasting, meteorological research, and improvement of general public service.

HAROLD M. SAMPSON RETIRES

Completing a 26-year tour of duty at WBO Philadelphia, Harold M. Sampson, meteorological aid, retired May 31 at the age of 60. His service in the Bureau totaled 33 years. Mr. Sampson, who was born in 1889 and graduated from Harvard University in 1915, entered the Bureau in 1916 as an assistant observer at Chicago. His second station was Hartford, Conn. From there, in 1923, he transferred to Philadelphia and served at that station until retirement. His address is 820 Magill Avenue, West Collingswood, N. J.

ALBUQUERQUE OBSERVER AWARDED $25

Paul H. Taft, surface observational supervisor at Albuquerque, N. Mex., has been awarded $25 under the Employee Suggestion Program for an idea which will save the Bureau an estimated $500 annually. Mr. Taft suggested that when a rawin or pibal flight goes above 11,000 feet the No. 4 punch-card be overpunched to indicate the presence of a second card carrying data for the additional height. This helps to assure that all cards in the deck are present without the necessity of referring to the original records, thus saving considerable time in checking.

A "DAILY DOZEN" FOR LETTER WRITING

How effective are the letters you've written lately? Are they complete? Concise? Clear? Correct? Appropriate in tone? Neat and well set up? Some general standards of effectiveness are set forth in Chapter F-10, Volume 1, of the Weather Bureau Manual. Have you checked your letters against them recently? In addition to them here are a "daily dozen" of more specific criteria to use:

1. *Are your letters neatly typed and easily read?* Is the letter "set up" with well balanced margins or is it crowded up on the letterhead with too much white space at the bottom? Is your letter a picture in a frame? Is the type clean, sharp, and in good alignment? Are the paragraphs short? Remember that first impressions are lasting—the impression the recipient gets when he first looks at your letter is most important.

2. *Do your replies cover all the points raised?* It is a good idea to mark or number all the points in a letter which require answering, so that in your hurry to get through your dictation none will be overlooked. Nothing is more disastrous to good will than the careless handling of requests for specific information. If a man asks three questions give him three answers.

3. *Are your letters free from vague terms and involved sentences?* Try to express your thoughts in simple and direct language. Use short concise sentences. Use a new sentence to express each new thought. Don't try to crowd three or four ideas into one sentence. What you are saying may be clear in your mind, but will the recipient see the same picture?

4. *Do your letters come to the point quickly?* The reading of mail is making more and more of a demand on people's time. The reader may be in an impatient mood when he reaches your letter. So come to the point quickly. Keep on the main track. Say what you have to say, in a friendly, good-humored way, and sign off.

5. *Are your letters free from hackneyed and commonplace phrases?* Are you still "begging to advise," "wishing to state," and "hoping to hear" in your letters? You don't talk that way, so why write that way? Try to be yourself in your letters and avoid these threadbare and moss-covered mean-nothings which mar so many letters. They waste your time, the time of the transcriber and the time of the person who has to read them.

6. *Are your letters coldly formal?* In your desire to be concise be careful not to give a curt tone to your letter. No matter what your position may be, you are here to serve. Do your serving cheerfully and gladly.

7. *Have superlatives been toned down and are adjectives well chosen?* Are you working "best" and "very" overtime? Are you using descriptive adjectives that have lost their cutting edge, and whose effectiveness has been dulled by overuse?

8. *Do your letters anticipate further questions?* A really good correspondent puts himself in the place of the man with whom he is corresponding. He not only gives the information which the man seeks, but any other information which he thinks the man needs to reach a decision which might be helpful.

9. *Do you appeal to the recipient's self-interest?* There is always a temptation to talk about what *we* are doing, what *we* hope to do, and what *we* have done. We think everyone is interested in our problems, our troubles, our distractions. Forget yourself. Think about the man to whom you are writing.

10. *Do your letters create confidence and ring true?* The wish to have the pompous, silk-hatted gentleman slip on a banana peel is almost universal; readers feel the same way about correspondents who write in a pompous, high-hat style. Pretentiousness not only robs letters of sincerity and naturalness, but it also creates antagonism toward the writer and the institution he represents.

11. *Are your letters properly punctuated?* A speaker punctuates his message with pauses, gestures, and changes of voice; a writer accomplishes the same purpose by the intelligent use of commas, semi-colons, periods, colons, parentheses, and other marks of punctuation. The object of both speaker and writer is the same: to convey thoughts clearly and effectively. And don't think you have to know the rules to do this. Frequently the correct use of these aids to clearness and more forceful expression depends on the writer's good judgment. Punctuation marks are really just "stop and go" signals.

12. *Is the letter one you could proudly show as an example of those you write?* Try to make them all like that!

LINCOLN MAN COMMENDED FOR FIRE ACTION

For his decisive action in assisting another man to safety during a disastrous fire at the Lincoln, Nebr., Municipal Airport, William K. Schneider, meteorological aid at WBAS Lincoln, has been officially commended by the Chief of the Bureau.

The fire, which began when an airplane caught fire while being repaired, inflicted a million dollar damage on the airport and completely destroyed a hangar of the Nebraska Air National Guard. When the fire was seen to be out of control, Mr. Schneider, several CAA employees, and National Guard personnel attempted to save furniture, equipment, and fixtures of the hangar offices by carrying them out. While they were thus engaged, the main hangar roof collapsed. Fearing that the offices were in immediate danger, all the men rushed to escape as quickly as possible, each man seeking the nearest possible exit. A National Guard officer, in leaping through a window, caught his foot in the chain which held it open, causing it to slam shut and leave him dangling head down and helpless. Seeing the predicament of the guardsman, Mr. Schneider returned to him, opened the window, and lifted him clear. Flames broke into the offices a few minutes later.

The Chief of Bureau has written Mr. Schneider, "We were extremely pleased to learn that you, during the actual disaster, had demonstrated great coolness and presence of mind by rescuing a member of the Air National Guard, who might otherwise have perished . . . You are hereby officially commended for your action. It reflected great credit upon the Bureau, as well as yourself, and was consistent with the best traditions of our service!"

SANTA CATALINA OBSERVER RETIRES

Eugene C. Kovediaeff, who came to this country from Russia in 1921, retired May 21 after 19 years with the Bureau. He was born in Chistopol, Russia, in 1883, graduated from the University of Kharkov in 1908, and served as a pilot in the Russian navy during the first World War, reaching the rank of lieutenant commander. Mr. Kovediaeff joined the Weather Bureau as an airway observer in 1930 at Lebec, Calif. In this capacity he served also until 1943 at Sandberg, Calif.; Las Vegas, Nev.; and Mt. Wilson, Buffalo Springs, and Santa Catalina, Calif. In 1943 he was converted to a meteorological aid and continued at Santa Catalina until retirement. His address is Box 1301, Santa Catalina, Calif.

EBERHARDT NEW OIC AT SALT LAKE CITY

John C. Eberhardt, former district forecaster at WBAS Denver, has been selected to fill the position of official in charge at WBO Salt Lake City left vacant when Gershom K. Greening died of a heart attack in July 1948. Mr. Eberhardt is 45 years old and has been with the Bureau for 18 years. Entering at San Diego after graduating from Occidental College, he served successively at Cheyenne, Denver, Anchorage, and Fairbanks (OIC), returning to Denver in 1946. During 1939–1940 he attended the California Institute of Techology on a Weather Bureau scholarship.

As OIC at Salt Lake City, Mr. Eberhardt is technically and administratively responsible for the programs of both the city office and the airport station. These programs involve furnishing general weather service to a population of approximately 250,000 people. The airport station as an airway forecast center carries a heavy load of State, airway, and terminal forecasts, FAWS service, and the usual observational program. A program of direct radio broadcasts is carried on.

WBO Salt Lake City is the section center for the States of Utah and Nevada, an area of about 197,000 square miles. Included in this program are the development of methods and procedures, the direction of crop weather work for the 2 States, and supervision of about 200 climatological substations and 40 crop reporters.

Another important aspect of the station program is that of water supply forecasting for the benefit of Federal, State, and local government officials and private irrigation and power interests.

The station is also a river district center, responsible for the preparation and dissemination of forecasts of river stages and the issuance of flood warnings in a river district with an average annual flood damage of approximately $30,000.

BAKER OIC RETIRES

Fredrick J. Thomas, official in charge at Baker, Oreg., retired May 31. Although Mr. Thomas was also technical assistant at Billings, Mont., for several years, he is best known for his long service at Chicago where he spent a total of 23 years. He joined the Bureau originally in 1912 at Chicago, but in 1918 resigned to enter private industry. Five years away from meteorology was enough, however, and in 1923 he returned to the Bureau. H. J. Cox, long-time OIC at Chicago, had liked Mr. Thomas' work so well in the earlier period that he placed a special request with the Central Office that he be returned to his old position. This request was granted and Mr. Thomas remained at Chicago until 1942 when he transferred to Billings, and then to Baker early this year.

MRS. MARGARET S. MITCHELL RETIRES

Because of poor health resulting from a serious automobile accident in August 1948, Mrs. Margaret S. Mitchell, meteorological aid, retired May 31 after nearly 28 years at WBO Cheyenne. Mrs. Mitchell entered the Bureau in 1921 as a messenger, but soon took over the printing work for the Cheyenne section center. Later she was a clerk and then an observer. Her address is 822 East 9th Street, Cheyenne, Wyo.

SPRINGFIELD, MO., HAS MANY VISITORS

More than 1700 students, teachers, and parents had visited WBO Springfield, Mo., during the spring season this year by April 30, we are informed by OIC Charles C. Williford. An actual count was begun April 13, and by the end of the month 913 visitors, in 25 separate groups, had seen the station. During March, when the rural schools in the area around Springfield began to close, an estimated 800 visited it. Several hundred more were expected during the fore part of May when the last of the town grade schools would close.

Each group is given a 20 to 30 minute talk by either Mr. Williford or Professional Assistant James N. Hosey, to explain the instruments in the station and the functions of the Weather Bureau. "One hundred percent of the various groups, ranging from first graders to Drury and SMS College seniors," says Mr. Williford, popularly known as the "Sage of the Ozarks" for his daily radio talks, "all advised us that they listen religiously to the daily weather broadcasts emanating from this office."

THUNDERSTORM PROJECT REPORTS

From time to time we have listed the published material concerning the Thunderstorm Project. Below is the latest revised list of reports on the Project which are now available for distribution:

A Project on Thunderstorm Microstructure.
Report on Circulation and Structure of Thunderstorms.
The Bright Line (a probable explanation of the bright line noted on radar scope.)
Guided Propagation of Radar in Thunderstorm Conditions.
Operation and Activity of the Thunderstorm Project, Phase I (to 9/20/46).
Summary of Pilot's Report of the Thunderstorm Project, Phase I.
Operation and Activity of the Thunderstorm Project, Phase II (4/2/47–10/1/47.)
Handbook on Thunderstorm Project (a series of photographs showing the numerous stations and terrain surrounding each.)
Report on Thunderstorm Conditions affecting Flight Operations.
Thunderstorm Project, Phase II.
Measurement of Rain Temperature.
Causes of Thunderstorms on the Florida Peninsula.

REPLACEMENT OF AWARD INSIGNIA

An honor award or length-of-service pin or emblem which is lost by the recipient will not be replaced by the Department of Commerce, according to the Department's Informational Bulletin No. 60, dated May 3, 1949. The Bulletin gives as the reason the fact that:

Replacement without cost would be expensive and difficult to justify from an accounting standpoint, and the booking and the fund transfers entailed in the sale of replacements would be inordinately costly.

HOW DES MOINES PEOPLE USE FORM 1030

Heating problems and the settlement of claims are the two most important single uses of climatological data in Des Moines, Iowa, a recent survey by Wayne L. Decker, climatological service aide, reveals. Together these two are the reasons 70 percent of the local users of the monthly meteorological summary, form 1030, have requested that it be mailed to them. Another 21 percent want the form for miscellaneous business purposes, and the remaining 9 percent for personal reasons.

In order to get first hand experience in meeting and talking to the people who use climatological statistics, and also to overcome the shortcomings of a mail questionaire, Mr. Decker personally interviewed each of the 91 individuals or representatives of business firms on the local mailing list for Form 1030.

Forty-six people (50 percent) gave as their chief interest in the data the sale of heating equipment or fuel. They use the information, the survey showed, for (1) calculation of the efficiency of heating plants in buildings or factories; (2) design of new heating units; (3) to answer complaints of customers feeling that their units are burning too much fuel; and (4) to determine when fuel oil deliveries should be made to those customers who require oil deliveries on a "keep full" basis.

The second large segment of the list, 20 percent, is composed of those interested in the settlement of claims, generally either claims against transportation companies, or those involving accidents or insurance. When claims against transportation companies for damage to perishables must be settled before the 1030 is published, the data are obtained either from the newspaper bulletins or by calling the Weather Bureau. In other cases the claims are not pressed until after the publication has been received so they may be handled more easily. Claims connected with accidents in which the weather element is important may be settled on the basis of the information in Form 1030. These usually involve either street accidents or some type of workman's compensation.

Miscellaneous business activities account for another 21 percent of the users. Of the 19 people or firms in this group, 6 used the form in sales analysis or promotion; 3 for educational purposes; 2 for news features; 2 for research; and one each in connection with construction work, water supply, governmental activities, public service, chemistry, and promotional activities.

The remaining 9 percent indicated only a general personal interest. Some of these people had had a use for the 1030 in connection with their businesses at one time and wished to continue receiving it. Others had discovered by some means that the form was free and asked to be placed on the mailing list.

RESPONSIBILITY FOR LOCAL FORECASTS

Public criticism has on several recent occasions been directed at the Bureau because local officials have attempted to shift the blame for inaccurate local forecasts onto the district forecast center. It will bear repeating that the issuances of the district forecast centers should be used as guides in issuing local forecasts, but responsibility for the final local product belongs to no one but the local office. This is stated clearly in Chapter B-12, Volume III, of the Weather Bureau Manual: "The authority to prepare local forecasts and the responsibility for the preparation and distribution of local forecasts for a city in which there is a Weather Bureau Office rests with the local official in charge." It is suggested that employees study Chapter B-12 thoroughly and again review the instructions for local preparation and distribution of warnings contained in the "Manual of Instructions for Issuance of Cold Wave Warnings" (WB No. 1347) and the "Storm Warning Manual" (WB 1455).

TRAVEL ALLOWANCES FOR F. Y. 1950

The maximum rates for travel allowances under the provisions of Public Law 92, 81st Congress, dated June 9, 1949, for per diem in lieu of subsistence and for mileage for use of privately-owned vehicles (automobiles and airplanes) while traveling on official business are increased to $9, and 7 cents, respectively. Application of the above rates is permissive rather than mandatory.

Serious uncertainties still lie ahead in working out the fiscal program of the Weather Bureau for Fiscal Year 1950, and pending a thorough study of the stuation, the existing schedule of rates as outlined in the Weather Bureau Manual will be continued in force until further notice. If and when the means are made available for improvement in travel allowances, a new schedule will be promulgated.

In the meantime the Central Office will appreciate receipt of specific factual information from travelers on existing actual costs, differentiating between travel involving expenses for lodging and that which does not involve such expenses. Such information should be forwarded to the Central Office for the attention of the Fiscal Section.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

(WB—6-29-49—800)

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WEATHER BUREAU

TOPICS

VOL. VIII JULY 1949 No. 43

IN THIS ISSUE

OBSERVERS ALLAY PUBLIC APPREHENSION

Three observers at WBAS Indianapolis, Miss Florence Hoover, Oliver J. House, and Sheldon J. Peirce, have been commended by the Chief of Bureau "for the competence, courage, and calmness displayed by them while 'under fire' when the residents of Indianapolis became alarmed by tornado rumors on May 21, 1949."

As reported by OIC Paul A. Miller, Messrs. House and Peirce were on shift alone during the afternoon of May 21, since it was Saturday and no professional employees were scheduled for duty either at the airport station or in the city office. Tornadoes and severe thunderstorms developed in southern Illinois and Indiana, and one tornado near Terre Haute, Ind., had caused considerable loss of life and much property damage. The official forecast, as well as the ominous appearance of the weather, made it evident that stormy conditions would continue for some hours in the Indianapolis area.

As the result of this situation, public fears were intensely aroused. These fears were magnified by rumors of immense destruction and new storms entirely out of proportion to the facts. The Weather Bureau, police department, radio stations, newspapers and other agencies were swamped with requests for information.

Upon development of this situation, the two men on duty at the airport immediately gave as complete information to the newspapers and radio as was possible with the resources at their command, and answered telephone inquiries calmly and intelligently, allaying fears by giving out accurate information. When OIC Miller arrived at the airport about 7:30 p.m. the situation was well in hand. "In view of the fact that neither of these men hold professional grades, and they were also hindered with many special observations and other duties at the time," reports Mr. Miller, "I think that their analyses of the situation and actions during this emergency were distinctly in the interests of the public and were a credit to the Weather Bureau." Mr. Peirce stayed long after his usual tour of duty ended at 11 p.m. to assist Miss Hoover who came on at that time. She, working alone in the later hours, also handled the situation in a very competent and praiseworthy manner.

No tornadoes actually occurred at Indianapolis, but the work of these three observers did much to prevent the spread of public hysteria in the area. "It is largely the emergency

actions of this kind by employees who are loyal and alert to furnish every possible weather service for the public welfare," wrote the Chief of Bureau, "that enable the Bureau to maintain a good public service record."

HIGHWAY SAFETY PROGRAM

In 1946 a group of experts and laymen was called together by the President of the United States to formulate an action program for highway safety in this country. The public support resulting from this program has reduced the traffic-fatality rate to the lowest in history. Nevertheless, an annual toll of 32,000 deaths, 1,100,000 injuries, and $2,650,000,000 in accident costs must be regarded as a fantastic and unnecessary price to pay for highway transportation.

Again in June of this year the President's Highway Safety Conference met in Washington, D.C., to strengthen the safety program. The cornerstone of the safety structure, it was emphasized again and again, is the acceptance of responsibility by the individual driver for safe driving. Weather Bureau employees driving official vehicles are particularly urged to accept this responsibility and by care and intelligence do their part to reduce the appalling figures cited above. Many people recognize the safety problem when it applies to the other fellow. Weather Bureau employees should, as good citizens, contribute to highway safety in driving their own cars, as well as when driving a Government-owned vehicle.

WBO LOUISVILLE GETS A NEW OIC

WBO Louisville is the section center for the state of Kentucky and a river district center of outstanding importance and difficulty. In the surrounding river district there occurs an average of one flood per year and an average annual flood damage of approximately $13,700,000. The station provides general weather service to an area population of approximately 750,000.

The official in charge at Louisville, succeeding Ellwood E. Unger who retired February 28, is now O. Kenneth Anderson, former executive officer of the Philippine Rehabilitation Program. Mr. Anderson joined the Bureau in 1928 as a minor observer at Medford, Oreg. He stayed there until 1937 and then spent a year at Oakland. From 1938 to 1942 he was OIC at Fairbanks, Alaska, transferring to the newly organized regional office at Anchorage in 1942. In 1944 Mr. Anderson returned to the United States for assignment at Burbank, where he was technical assistant until going to Manila with the Philippine Rehabilitation Program in 1947.

SCIENTISTS STUDY TOBACCO PRODUCTION

The effect of weather on the growth, yield, and quality of the tobacco plant is to be the subject of study by scientists at North Carolina State College (Raleigh) during the next several years. A basic purpose of the study, however, is to develop research techniques in climatology. The tobacco plant was selected mainly for convenience -- any other plant could have been used. This research project, which will be conducted in cooperation with the Weather Bureau, is described by Garrett DeMots, OIC at WBO Raleigh, in a recent issue of the Region II Breeze.

One of the most difficult problems confronting those undertaking crop weather studies, according to Mr. DeMots, is the separation of weather and non-weather factors. The use of phenological data collected in the past with no other objective in mind but the compilation of crop statistics has usually met with disappointment. For example, much data is available on tobacco, principally on yield, which could be correlated with past weather data. But to do this without investigation of the conditions under which the data were collected might be quite misleading. Fertilizing and cultural practices may have changed during the period for which the data are available. Such changes alone could have had a pronounced effect on the crop, so much so that the weather factors may have been insignificant, or, more likely, might be confounded with other factors and not isolated. The experiment at North Carolina State College is designed, as far as is possible, to overcome such difficulties.

Tobacco plots at Rural Hall, McCullers, Greenville, and Whiteville are to be used in the experiment. All these plots will be on State College Agricultural Experiment Farms, where variety tests in tobacco are conducted each year. Each plot will be 10 by 40 feet in size. Cultural practices will be rigidly controlled; as one of the scientists facetiously put it, "Even the same mule will be used from year to year." Fertilizer applications will be uniform. Soils in the plots, while different, are classified. In other words, all non-weather factors are as far as possible to be controlled and kept uniform.

A meteorological station will be located at each plot. In order that results obtained may be applied to North Carolina in general, there will be a standard exposure of maximum and minimum thermometers and an 8-inch standard rain gage at each farm. It is hoped that, if the results can be expressed as correlations with meteorological data obtained at these

standard exposures, then past climatological data collected from Weather Bureau cooperative stations may be utilized in applying the results to the State as a whole. In addition to the standard "co-op" equipment, each station will be equipped with a hygrothermograph. At the farm designated as the main station, measurements of temperature and humidity will be made at several levels in the plot. Evaporation and wind movement will also be measured at the main station and possibly one other.

In addition to meteorological measurements, data on variations in soil, temperature, and moisture will be obtained. These elements are to be measured at three levels and at several different points within each plot.

The phenological data to be collected are date of planting, date of blooming, and date of harvest. Measurements on growth will be made weekly, including distance between nodes, diameter of stalk, breadth of leaf, and height of plant. At the end of the growing season a chemical analysis of samples of the leaves will be made and a U. S. Inspector's appraisal of quality will be obtained.

From a statistical analysis of the meteorological, phenological, and other data, it is hoped to determine the influence of weather on the tobacco plant. It is contemplated that several years will be required to complete the study.

TOPICS GETS A "FACIAL"

The "new look" to TOPICS this month is the result of major changes in its preparation. For nearly 35 years the magazine has been set up in type by hand, but the Joint Commitee on Printing has disapproved of further use of this means of composition. And since the amount of work done in the Central Office printshop did not justify the procurement of a typecasting machine, other means for preparing TOPICS, as well as the Weekly Weather and Crop Bulletin, had to be found.

The headlines are still set in type, but the body of the magazine has been prepared on the "justifying" typewriter, which evens the right-hand margin, and printed by the photo-offset process. A special advantage of the new procedure will be the possibility of carrying pictures and graphic material to a much greater extent than has been possible in the past.

OUR COOPERATIVE OBSERVERS

The Weather Bureau's unpaid cooperative observers are an indispensable part of its operating organization. Most of them do an excellent job of taking observations and recording local climatological data which are essential to our public service program. Many have served long and faithfully, in some cases more than 50 years.

The network of cooperative observers is believed to be one of the best examples we have of the "American Way" of getting things done - through cooperation. Historically, the present meteorological network has its beginning in the lay observers appointed by the Smithsonian Institution about the middle of the 19th century.

In general the observers serve without pay except in cases where extra duties have been assigned, such as making reports for the river forecasting service or for crop weather bulletins.

The Bureau has established, after a long experience, the workload limit beyond which it cannot expect an observer to serve without pay. This experience has likewise developed "section center diplomacy" which has been found to be essential to the supervision of lay observers. The Bureau is now attempting to show its appreciation to the 6000 or more faithful observers who are the backbone ot its cooperative network. Department of Commerce length-of-service pins are being secured for them, and these pins will be available for distribution shortly. Recently, 1000 subscriptions to Weatherwise were purchased for distribution to cooperative observers - this to keep them informed of latest developments in the field of weather expressed in terms understandable to the layman. The Central Office is now considering the possibility of increasing the number of Weatherwise subscriptions in order to supply a copy to all unpaid cooperative observers if funds permit such action.

Another type of appreciation which the Central Office wishes to encourage is the issuance of periodic newsletters, preferably quarterly, by the section directors. Several section centers are already using this informal method of bringing the observer into the Weather Bureau "family" with considerable success. While newsletters are not a substitute for personal visits, they have proved effective in securing and maintaining observer interest. The newsletters carry person-

al items about the observers, brief discussions of instrumental problems, and explanations of changes in forms, instructions, or procedures. They attempt to show the observer just where his efforts are leading, how valuable his observations are, and that he is rendering a high type of public service.

Some idea of the reactions to these letters are expressed in the following comments submitted by section directors:

Only a limited number of expressions of opinion were received from our cooperative observers after the issuance of our newsletter in December. Those received were highly favorable, and several of our poorer observers showed marked improvement in the promptness and completeness with which forms were forwarded in the months immediately following its issuance.

The response from cooperative observers is surprisingly enthusiastic. About 99% expressed their willingness to help in providing material for the publication, and 100% desired to be included on the mailing list. We received 15 suggestions for a name, and over 100 suggestions for weather subjects observers would like to have discussed. It appears that our newsletter is off to a good start.

Our unpaid cooperative observers deserve all the support the Bureau can financially afford.

MYERS NEW OIC AT BAKER

Following more than 6 years as a weather officer in the Air Force, Fred Myers returned to the Bureau in May as official in charge at Baker, Oreg. He replaces Frederick J. Thomas who retired May 31. Mr. Myers, who first entered the Bureau in 1922 as an assistant observer at Houston, Tex., transferred to Tatoosh Island in 1928 and was OIC there until 1937. In that year he transferred to Tacoma, Wash., as OIC, remaining there until 1942 when he went on military leave. A captain in the Air Weather Service, Mr. Myers served in the Air Force until December 1948.

SUGGESTION CHANGES MESSAGE PROCEDURE

A suggestion that weather messages from Harrington, Wash., be telephoned to Spokane instead of being telegraphed to Seattle has brought a $25 award to Eugene H. Larcom, observational supervisor at WBO Seattle. The new procedure will not only save approximately $470 a year in toll charges, but will reduce the time between the original filing of these messages and their receipt in Seattle. Spokane now places the message on the teletype as soon as received by telephone; under the old procedure there was delay at the telegraph offices at both ends.

WINTER AT EUREKA SOUND

For light summer reading we recommend the following excerpts from station journal at Eureka Sound, N.W.T., at nearly 80° north latitude. The everyday experiences of our Artic observers should help to cool the hottest day here "in the South."

Dec. 1, 1948. Both (James) Morton and (Lawrence M.) Nielsen have frozen finger tips after last night's unsuccessful wolf hunt. Evidently the rifle that Nielsen seized from the gun rack was empty, and he spent quite some time outdoors with his mittens off trying to inject a cartridge into the breech before he realized that the magazine was empty. Frozen finger tips are, however, accepted as an unavoidable annoyance during the winter season, and generally no sooner has a blister formed and new skin grown than they become frozen again, making it aggravating, if not painful, to use a typewriter.

Jan. 17, 1949. A difficult job getting the Kohler generator to start this morning as the temperature is back to -54°, and more than 3 hours of heating is required before the engine will turn over.

Jan. 18, 1949. As the temperature is -50° and colder, it is necessary these mornings for (Chesney E.) Twombly to start the fire in the powerhouse at 5:30 a.m. so that the Kohler will be ready to operate at 8:30 or 9.

Jan. 25, 1949. Morton and (Murray) Dean measure the ice this afternoon. Through the weather was practically hot, with the mercury at -9° this job of digging through the ice has now become a distasteful and tiring chore. Thickness was 63 inches, and the amount of chiseling necessary to get through this amount is enough to wear out two men. Symptoms are similar to the local occupational disease known as "Kohler fever," a state of exhaustion resulting from cranking the Kohler generator for a half hour or an hour before breakfast, or even on a full stomach for that matter.

Feb. 1, 1949. For the last week or so we have made a test each noon, at about 1:15 p.m., to determine whether it was possible to read ordinary newsprint outdoors. For two or three days it was possible to do this, but only with considerable straining, but today the light was such as to allow (Raymond R.) Roszek to read a page from a book with practically no trouble.

Feb. 6, 1949. The sky at noon is very red today; we are glad to learn that Resolute saw the sun for the first time yesterday, and Dundas Harbor greeted it on the 3rd.

Feb. 14, 1949. This morning we steal about 500 feet of telephone wire from the airstrip line and immediately after dinner commence the inventory of food stocks on the hill. With Roszek and Hatfield (one of the Canadian members of the staff) shovelling away the drifted snow from the pile of cases and crates and counting the contents, Dean leisurely telephones this information down to Twombly, who is armed with pencil and paper in the weather office. As the temperature is close to -50° and a gentle, yet uncomfortable breeze is blowing up on the hill, we do not work very long, but nevertheless accomplish far more than would have been possible if attempting to do the writing outdoors.

Mar. 9, 1949. First good long pibal of the spring this afternoon. Lately our observations have been terminated owing to the freezing up and stopping of the timing devices, both clocks and watches, as we have at this time no communication to the theodolite shelter, and the clock must be taken outdoors.

This afternoon, however, the Ansco Timer was placed face up in the top half of an ordinary pilot ballon box in the bottom of which was a balloon filled with hot water. This arrangement had the desired effect of keeping the clockwork warm enough to operate normally.

Mar. 18, 1949. Nielsen freezes one side of his face really quite badly this afternoon while taking the pibal, and has to be relieved before the observation was through. Practically his whole right cheek was badly frostbitten.

Mar. 22, 1949. After only four minutes of observing, Nielsen again freezes his face while taking the pibal, and is relieved at the theodolite.

PUBLICATIONS DISTRIBUTED

A revised edition of the pamphlet Florida Hurricanes has just been printed. First written by Richard W. Gray, it appeared in the Monthly Weather Review for January of 1933. In 1936 it was revised by Grady Norton, who has again revised the paper and brought the facts up to date.

Copies of the phamplet are being distributed to all first-order stations. However. it is expected that stations in the area frequently affected by hurricanes will require a stock for use in answering requests for hurricane information. The use of the pamphlet for this purpose often will be found more practical and economical than sending letters in answer to individual queries. Requests for additional copies should be made to the Forms and Publications Distribution Unit of the Central Office.

The following publications were distributed to forecast offices during the months of April and May:

Photography from the V-2 Rocket at Altitudes Ranging Up to 160 Kilometers by T. A. Bergstralh, NRL Report No. R-3083, Naval Research Laboratory, Washington, D. C., April 1947.

"The Problem of Artificial Control of Rainfall on The Globe. I. General Effects of Ice-Nuclei on Clouds" by Tor Bergeron, reprinted from Tellus Vol. 1, No. 1, February 1949, Stockholm.

Report on Studies of Atmospheric Energy, by Bernhard Haurwitz, Research Division, College of Engineering, New York University, New York, April 1949.

On Energy Equations for the Atmosphere, by James E. Miller Research Division, College of Engineering, New York University, New York, January 1949.

"Meteorological Data for Little America III", by Arnold Court. Monthly Weather Review Supplement No. 48, USWB, Washington, 1949.

"HUMANIZING" JOBS IS JEFF DAVIS' JOB

Personal adjustment to the job is frequently a problem for employees of any large organization, whether it is a business corporation or a Government agency. Because such an organization tends to be impersonal in its relations with its employees, their jobs tend to lose some of the most powerful human incentives -- pride of achievement, individual recognition, etc.

To assist in the restoration of these incentives, specific programs of "recognition" are usually set up. The Weather Bureau carries on such a program through its Employee Relations Office, headed by John J. ("Jeff") Davis. Included are the Employee Suggestion Program, honor awards, length-of-service awards, within-grade promotions for meritorious accomplishment, letters of commendation and similar devices for giving recognition to the individual.

Mr. Davis, who joined the Bureau in 1945 after several years as a weather officer in the AAF Weather Service, took over his present position in 1946. Before the war his career had included teaching high school in Kansas; establishment of new field offices and management planning work for the Social Security Board; and serving as Chief of Classification and Budget Planning, and Chief of Organization Planning in the Office of the Chief of the Air Corps. For this latter work he received special commendation from the Secretary of War.

In order to further "humanize" Bureau jobs, the Employee Relations Office carries on a counseling service whereby employees and supervisors may discuss their problems privately and obtain advice on solving them. The efficiency rating program is also administered through the office. A Safety and Health Unit is concerned with safety problems, employees compensation, and conditions affecting the health of Bureau employees. Mr. Davis also assists in the development of social and recreational activities, and provides for the dissemination of information on housing, health, transportation, insurance, etc. By such means the Bureau assists in as many ways as possible for the employee to adjust to his job and gain the greatest amount of satisfaction from it.

VAN THULLENAR NEW ARD AT KCRO

When Clayton F. Van Thullenar took over the job of Assistant Regional Director of the new consolidated Regional Office at Kansas City recently he knew what "his boss" would be like. Twice before in his career he has entered on a new job to find

that John A. Riley was his immediate superior. In 1923, when Mr. Van Thullenar entered the Bureau at the Broken Arrow, Okla., kite station, Mr. Riley was OIC. Then in 1930 transferring to Dallas, Tex., from Toledo, Ohio, where he had opened an airways station, he found Mr. Riley once more to be his official in charge. Between these years he had spent 5 years in the Central Office, and had worked a year for a private airline.

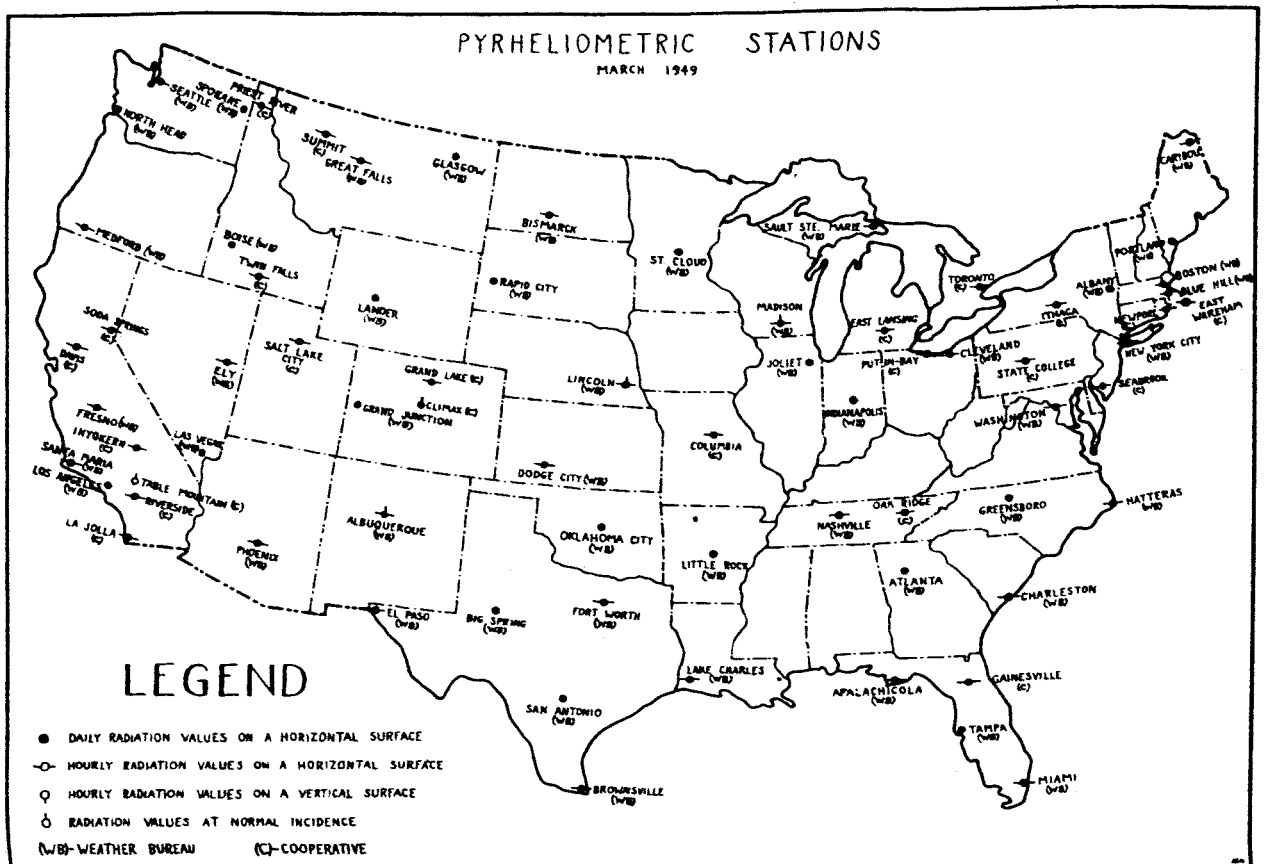
Dallas remained Mr. Van Thullenar's station until 1936, when he transferred to Salt Lake City. In the spring and fall of 1937, at the request of the Soviet Government, he went to Alaska to forecast for the searchers for the lost Russian over-the-pole flight. When a district forecast center was opened at Albuquerque in 1939 he was made supervising forecaster. The following summer he opened a new district forecast center at Boston, remaining there until 1947 when he returned to the Central Office as assistant chief of the SR&F Division.

From April 1947 to March 1949, Mr. Van Thullenar was in Germany with the Department of the Army as chief of the Meteorological Branch of the Military Government for the United States. He was the American representative on the Allied Control Authority Committee for Meteorology and supervisor of the German Meteorological Service in the U. S. zone of occupation.

TILSON OIC AT WBO MOBILE

The official in charge at WBO Mobile, Ala., is responsible for a general weather service to a metropolitan area of more than 115,000 population; hurricane warning service for 5 coastal counties and small craft warning service for nearby coastal points; supervision of a river district of average difficulty and importance; and supervision of a separate airport station.

The newest incumbent in this position is William L. Tilson, who transferred from WBO Raleigh, N.C., following the retirement of former OIC Frank T. Cole. Before joining the Bureau in 1930, Mr. Tilson had taught school for several years in Tennessee and North Carolina. His first position in the Bureau was junior observer at Macon, Ga., staying there until 1936. Following brief assignments at Mobile, Jacksonville, and Pensacola in 1936 and 1937, Mr. Tilson settled at Mobile for a 10-year stay in 1937; from 1941 to 1947 he was OIC at the airport station. He spent a few months in 1947 at Nashville, Tenn. and then went on to WBO Raleigh where he remained until his present assignment.


PYRHELIOMETRIC STATIONS
MARCH 1949
LEGEND
DAILY RADIATION VALUES ON A HORIZONTAL SURFACE
HOURLY RADIATION VALUES ON A HORIZONTAL SURFACE
HOURLY RADIATION VALUES ON A VERTICAL SURFACE
RADIATION VALUES AT NORMAL INCIDENCE
(WB)-WEATHER BUREAU
(C)-COOPERATIVE
SEATTLE (WB)
SPOKANE (WB)
PRIEST RIVER (C)
NORTH HEAD (WB)
SUMMIT (C)
GREAT FALLS (WB)
GLASGOW (WB)
BISMARCK (WB)
MEDFORD (WB)
BOISE (WB)
TWIN FALLS (C)
LANDER (WB)
RAPID CITY (WB)
SODA SPRINGS (C)
ELY (WB)
SALT LAKE CITY (C)
GRAND LAKE (C)
GRAND JUNCTION (WB)
CLIMAX (C)
LINCOLN (WB)
FRESNO (WB)
INYOKERN (C)
SANTA MARIA (WB)
LOS ANGELES (WB)
LA JOLLA (C)
LAS VEGAS (WB)
TABLE MOUNTAIN (C)
RIVERSIDE (C)
PHOENIX (WB)
ALBUQUERQUE (WB)
DODGE CITY (WB)
OKLAHOMA CITY (WB)
EL PASO (WB)
BIG SPRING (WB)
FORT WORTH (WB)
SAN ANTONIO (WB)
BROWNSVILLE (WB)
ST CLOUD (WB)
SAULT STE MARIE (WB)
MADISON (WB)
EAST LANSING (C)
JOLIET (WB)
PUTIN-BAY (C)
COLUMBIA (C)
INDIANAPOLIS (WB)
LITTLE ROCK (WB)
LAKE CHARLES (WB)
TORONTO (C)
CLEVELAND (WB)
ALBANY (WB)
ITHACA (C)
STATE COLLEGE (C)
WASHINGTON (WB)
NEW YORK CITY (WB)
SEABROOK (C)
CARIBOU (WB)
PORTLAND (WB)
BOSTON (WB)
BLUE HILL (WB)
EAST WAREHAM (C)
OAK RIDGE (C)
NASHVILLE (WB)
GREENSBORO (WB)
HATTERAS (WB)
ATLANTA (WB)
CHARLESTON (WB)
APALACHICOLA (WB)
GAINESVILLE (C)
TAMPA (WB)
MIAMI (WB)

PYRHELIOMETRIC NETWORK EXPANDED

The Bureau has long recognized the importance of measuring the amount of solar radiation which reaches the surface of the earth. The importance of such data has also become sufficiently evident to other groups--agricultural, medicinal, photographic, and industrial--to warrant their installing pyrheliometers for their own use. Through a cooperative plan, these data are made available to the Weather Bureau. During the early 1920's the Bureau maintained the only three stations in the United States where observations of the amount of solar radiation received on a horizontal surface were taken. By December 1948 the number of measuring sites maintained by the Bureau had increased to 10, while the number of cooperative stations had swelled to 14.

To meet the need for solar radiation data for climatological and research purposes, the Bureau is expanding its pyrheliometric network. Consequently, 41 new stations have been designated in the continental United States, although all are not yet in operation. (See map on opposite page.)

For measurements of radiation on a horizontal surface, there are two standard types of recorders. The "strip-chart" recorder provides hourly values while the "integrating" recorder supplies only daily values but requires a very small expenditure of time in tabulating the records.

To supplement the data in the United States, 10 additional Weather Bureau and 4 cooperative stations are located outside continental U. S. The Bureau Stations: Annette Island, Alaska; Bethel, Alaska; Canton Island, Pacific; Eureka Sound, Canada; Fairbanks, Alaska; Keflavik, Iceland; Resolute Bay, Canada; Swan Island, West Indies; Thule, Greenland; and Wake Island, Pacific. The cooperative stations are: Barrow, Alaska; Honolulu, Hawaii; Pearl Harbor, Hawaii; and Toronto, Canada.

Horizontal surface measurements are not the only type of radiation records maintained. Seven stations are equipped to measure the amount of solar radiation received on a surface normal to the sun and one station determines the energy received on vertical surfaces facing different directions.

By the end of this year, when all recorders should be in operation, 71 stations in the United States will be gathering data on solar radiation. Such a pyrheliometric network will certainly contribute information on hitherto unanswered questions.

RIGBY VISITS EUROPEAN SERVICES

Frequent personal contacts between technical representatives of our Weather Bureau and those of Meteorological Services in other countries are extremely important, concludes Malcolm Rigby, C&HS Division information analyst, following a 9-week trip to several Western European countries. In a report to the Chief of Bureau and Central Office project leaders, Mr. Rigby expresses the opinion that these contacts should by all means be at the working level and on a "give-and-take" basis. Nor should they be hurried, for he believes that time spent in participating in and appreciation of the cultural aspects of the various countries is not only valuable but essential to a proper understanding of these services and their technical workers.

The primary purpose of Mr. Rigby's trip was familiarization with the personnel and facilities of the various Western European Services and, in particular, the publications in meteorology and climatology available in the libraries or in preparation by each service.

Leaving Washington, D.C., on December 1, 1948, Mr. Rigby flew to Frankfurt, Germany. From Frankfurt he visited offices of National Meteorological Services at Paris, France; Uccle, Belgium (a suburb of Brussels); De Bilt, Holland (about 4 miles from Utrecht); London and Harrow, England; Bad Kissengen and Wiesbaden, Germany; Lausanne (the Secretariat of the IMO) and Zurich, Switzerland; Rome, Italy, where there are two principal services, the military which is concerned primarily with aviation, and the civilian which handles other types of service; and finally back to Frankfurt again for a visit to the Institute of Geophysics there.

Transportation in most of Western Europe is rapid and frequent, Mr. Rigby reports, although trains were crowded and often it was impossible to secure first class sleeping accommodations. On the other hand, if an itinerary can be planned a week or two in advance, there is little difficulty and in most cases travel is cheap and comfortable. Hotels are modern and reasonable in price, and English is spoken universally, although speaking the native language helps, especially in restaurants. In Paris, London, and the cities of Germany rooms were poorly heated, it was difficult to get a bath and the meals at first seemed austere. After a day or two, however, he got used to the fare and ate heartily of everything. In Belgium Holland, Switzerland, and Italy meals were satisfactory but prices fairly high. Passport and customs difficulties were no

greater than in going from the United States to Canada, except going into Germany where there was much fuss over orders, currency, and luggage, because of the black market.

The return from Frankfurt was made via Keflavik, Iceland and Cape Farewell, Greenland to Newfoundland. South of Greenland the plane encountered a newly generated cyclone with icing so bad it was necessary to fly at 14,000 feet. The center of the cyclone could be identified by the breakers below, breaking from the northeast not 50 miles from a point where they were coming from the exact opposite direction under the influence of a whole gale. When they arrived over Newfoundland a blizzard forced them to land at Torbay, near St. Johns, guided by Ground Control Approach. The wind was so strong and the drifting snow so bad the plane had to circle for half an hour while plows cleared the field and then it was greeted by a crash wagon, two fire trucks and an ambulance. Between Torbay and Westover Field a brilliant display of the Aurora covered the whole sky for several hours. Mr. Rigby returned to Washington on February 4.

FUTURE FERTILE FOR FARMERS

The New England Radio News Service has announced in a broadcast script that if the 1949 special weather forecasts for farmers aren't the best ever, it won't be the fault of the weathermen at the Boston forecast center.

The visit of Mr. Kutschenreuter and several members of his staff to the University of Massachusetts Horticultural Station is described in the announcement. It is also mentions that the forecasters learned from fruit insect and disease control specialists what phases of weather have the greatest influence on scab infection of apple trees, and other pest hazards. The article continues:

But the weathermen didn't leave the matter there. They asked for another meeting to check up on how they have been doing during the scab period. And they had a lot more questions on what should go into their forecasts now that the insect season is just about here.

The weathermen who check up on the weather and prepare the agricultural forecasts went away from that meeting with a better idea of the problems of the farmers they serve. The agricultural experts got an insight to the problems of the men who predict the weather.

And the big result of this better understanding on both sides will be even better agricultural weather forecasts.

LIAISON WITH STATE AVIATION OFFICIALS

Because of the need for improved weather services for private flyers and requests by representatives of state aviation commissions for a closer liaison with the Weather Bureau, a nationwide program has been established for liaison between the Bureau and agencies handling state aviation interests.

Weather Bureau representatives have been appointed as liaison officers in the 42 member states of the National Association of State Aviation Officials. Appointments for the remaining six states and Alaska are still pending.

The following Weather Bureau officials have been notified of their selection as liaison officers for the states indicated.

Alabama: Arthur R. Long, Montgomery, Ala.
California: Clarence L. Smalley, San Francisco, Calif.
Colorado: Albert W. Cook, Denver, Colo.
Connecticut: Paul H. Kutschenreuter, Boston, Mass.
Delaware: George N. Brancato, Baltimore, Md.
Florida: Roger G. Plaster, Jacksonville, Fla.
Hawaii: Robert H. Simpson, Honolulu, T. H.
Idaho: Edwin H. Jones, Boise, Idaho
Illinois: Escal S. Bennett, Chicago, Ill.
Indiana: Paul A. Miller, Indianapolis, Ind.
Iowa: Clarence E. Lamoureux, Des Moines, Iowa
Kansas: Victor V. Phillips, Wichita, Kansas
Kentucky: O. K. Anderson, Louisville, Ky.
Louisiana: Stephen Lichtblau, New Orleans, La.
Maine: Paul H. Kutschenreuter, Boston, Mass.
Maryland: George N. Brancato, Baltimore, Md.
Massachusetts: Paul H. Kutschenreuter, Boston, Mass.
Michigan: Albert H. Eichmeier, Lansing, Mich.
Minnesota: Gilbert C. Voelker, Minneapolis, Minn.
Mississippi: George V. Fish, Jackson, Miss.
Missouri: George C. Allen, St. Louis, Mo.
Montana: Richard A. Dightman, Helena, Mont.
Nebraska: Edward F. Stapowich, Omaha, Nebr.
New Hampshire: Paul H. Kutschenreuter, Boston, Mass.
New Jersey: Frank Gemmill, Newark, N. J.
New York: E. C. Johnson, Albany, N. Y.
North Dakota: Frank J. Bavendick, Bismarck, N. D.
Ohio: Gilley T. Stephens, Dayton, Ohio
Oklahoma: Gerald P. Crawford, Oklahoma City, Okla.
Oregon: Winford J. Centen, Portland, Ore.
Pennsylvania: Leslie F. Conover, Harrisburg, Pa.
Rhode Island: Paul H. Kutschenreuter, Boston, Mass.
South Carolina: John C. Ballard, Atlanta, Ga.
South Dakota: Robert V. Lawrence, Huron, S. D.
Tennessee: Ernest G. Bice, Nashville, Tenn.
Texas: Hoye S. Dunham, Austin, Texas
Utah: John C. Eberhardt, Salt Lake City, Utah
Vermont: Paul H. Kutschenreuter, Boston, Mass.
Virginia: R. C. Schmidt, Washington, D. C.
Washington: Thomas E. Jermin, Seattle, Wash.

West Virginia: R. C. Schmidt, Washington, D. C.
Wisconsin: Lothar Joos, Madison, Wis.
Wyoming: Arlie R. Lowery, Cheyenne, Wyo.

Letters of notification to the Weather Bureau liaison officials include the following responsibilities which they have been asked to assume: (a) Become acquainted with the State Director of Aeronautics and his staff; (b) become familiar with problems and plans of the State Aviation Office having a bearing on aviation weather service; (c) obtain factual information regarding complaints against the Weather Bureau's aviation service and to submit these facts together with recommendations for improvements to the Central Office; (d) study the coverage of weather reports, forecasts and distribution facilities within the state in relation to the state aeronautical requirements and criticisms, and submit to the Central Office any recommendation for improvement.

The Central Office plans to issue a periodical newsletter to the W.B. liaison officials to keep them abreast of latest developments in this field of activity.

Further information on the operation of this liaison will appear in the near future.

CARSON TAKES OVER AT GALVESTON

The new official in charge at WBO Galveston, Tex., succeeding Percy J. Naughton who retired May 31, is Ernest Carson. Mr. Carson has spent nearly his whole career in Gulf Coast observing and forecasting. He entered the Bureau as a messenger at Houston in 1916, remaining there until 1921. In that year he was made OIC at Port Arthur and stayed until 1931. The next 4 years were spent as OIC at Pensacola, Fla., the city office. Mr. Carson rendered outstanding service at Miami during hurricane emergencies until he was transferred to the Central Office for a special assignment in 1948.

WRITING FOR "WEATHER" MAGAZINE

The editors of Weather, a monthly magazine for all interested in meteorology published by the Royal Meteorological Society, would like to obtain brief notes and short articles on meteorology from the United States which will be of interest to the layman and to meteorologists. Items on unusual weather events are especially welcome. Employees who wish to submit material to Weather may send it to the Central Office marked for the attention of the Scientific Services Division.

OBSERVER-BRIEFER JOBS BEING SET UP

A special type job at the grade of P-2, embracing the combined duties of weather observing and professional briefing service for aviation interests, has been the subject of staffing experiments conducted during the past year. These experiments, carried on at Chicago Airport and Idlewild International Airport at New York, have produced conclusive evidence that the job pattern is efficient and economical in meeting demands at the largest and most active airports.

Plans at present are to revise the staff patterns at a limited number of airport stations having a general weather service program and a greater than average volume of business in pilot briefing. It is anticipated that there may eventually be 30 to 40 such stations in the United States that will show a work load warranting the assignment of P-2 observer-briefers. The revision of staff patterns at all such stations will of course depend upon the availability of funds. The new jobs have been established at Chicago Airport, Idlewild International Airport, St. Louis, Buffalo, Houston, and Burbank.

The positions are being filled by appointments from the P-2 register, except where it is possible to fill them by reassignment, which in some cases may involve P-3 employees displaced from their positions because of lack of standing on the P-3 register. Some of these positions may also be filled temporarily by newly appointed or promoted P-1 employees in order to enable them to acquire the professional experience required for promotion to P-2. Area Training Offices are preparing training aids to assist officials in charge in instructing or refreshing these professional personnel in the techniques and procedures of the observational program.

SUGGESTION SAVES WRPC TIME

Miss Mary F. Schmidt, tabulating equipment operator in the Kansas City Weather Records Processing Center, has been awarded $20 under the Employee Suggestion Program for her suggestion of a better procedure for collating punched cards. The new procedure reduces the number of card runs necessary and is expected to save about 3½ hours per month of operating time at each WRPC.

CORRECTION

Through a typographical error the June issue of TOPICS was identified as Vol. IX, No. 42. The issue should be Vol. VIII, No. 42.

READING NOW UNDER PEACOCK

Transferring from Albany, N.Y., where he has been stationed for 8 years, Matthew I. Peacock in June became official in charge of WBO Reading, Pa., succeeding Charles S. Ling who retired May 31. Mr. Peacock entered the Bureau in 1917 as a messenger at Eastport, Me. In 1924 he went to Pittsburgh, in 1928 to Ithaca, then to Albany for a year and back to Ithaca until 1934. From 1934 to 1940 Mr. Peacock was OIC at Eastport. His next assignment was a year at Harrisburg, Pa., whence he transferred to Albany in 1941.

AIRLINE THANKS OCEAN OBSERVERS

Undoubtedly a weatherman's greatest satisfaction is the knowledge that his work has directly helped to protect lives or property. But some of our people are deprived of much of this satisfaction because they have no personal contact with those who use the results of their work. Among these are our observers on ocean station vessels. The fact that those who use the information these men furnish are appreciative is illustrated by the following letter received from a major airline:

Another winter season has come and gone, during which United States Weather Bureau observers have well and faithfully performed the arduous tasks involved in taking observations on the North Atlantic weather vessels. A short time ago two of our representatives were given the opportunity of inspecting one of these ocean vessels and came away much impressed with a better understanding of some of the observers' problems.

Because personal contact between these men and those who use their information is seldom possible, they may sometimes wonder whether the extra effort they go to on stormy nights in raging seas and on ice-covered decks to collect their data is appreciated. We would like to let them know that it very definitely is, and to thank all concerned for this splendid service. It has been and will continue to be a very important aid to trans-Atlantic flying.

FORMER LITTLE ROCK OIC DIES

Harvey S. Cole, until 1939 official in charge at WBO Little Rock, Ark., died June 6 at the age of 79. He had been ill only a short while before his death. Mr. Cole retired in 1939 after 38 years service at Louisville, Ky.; Vicksburg, Miss.; Charleston, S. C.; and Little Rock. A full account of his Weather Bureau service appeared in the November 1939 issue of TOPICS AND PERSONNEL.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

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WEATHER BUREAU

TOPICS

VOL. VIII AUGUST 1949 NO. 44

IN THIS ISSUE

GRADE ALLOCATIONS AND PROMOTIONS

Every career employee is interested in his opportunities for promotion and in the personnel policies and procedures by which eligible candidates are selected to fill vacancies in higher grades. The general principles of personnel administration in the Weather Bureau are of course based on statutes governing the Civil Service, and the Bureau necessarily conforms to the regulations of the Civil Service Commission. To carry out the general principles of the Civil Service and its merit system the Bureau follows certain personnel procedures, aimed not only at selecting the best qualified employee to fill each vacancy but also at determining the kind of work each employee is best qualified to fill and, whenever practicable, to place him or her in a position that will make best use of individual abilities. There are, naturally, practical limitations to freedom of selection and replacement in any organization. The Bureau's placement procedures and grade reclassification outlook are summarized below.

For many years Weather Bureau positions were graded comparatively low. Since 1943 many postions have been up-graded and in most categories grades are now at levels equivalent to those for similar work in other organizations. In a few positions Weather Bureau salaries are reported to be higher than those in other bureaus or agencies; in a fairly large number of positions, notably certain OIC positions and others with duties comparable to some in the CAA and military departments, Weather Bureau positions have not reached the grade levels justified. The Bureau has urged appropriations to enable it to lift the grades of these positions and hopes to take action in several cases during the next year. On July 31, 1949, the Bureau had a total of approximately 4650 regular (Civil Service) employees, about 1280 of whom are in professional grades, and 2285 in sub-professional. Since 1944 more than 1700 grade promotions have been authorized for Weather Bureau professional employees.

Doubtless the most important and at the same time most difficult problem in personnel administration is to ascertain the qualifications of each employee and prospective employee. Several elements go to make up an employee's qualifications and the Bureau endeavors to evaluate all factors such as personal ability, aptitudes and inclinations; training, including in-service studies as well as formal education and graduate work in meteorology; and career experience including the length and kind of specialized experience, length of service (seniority) etc. The Bureau aims to make use of the best modern methods for evaluation of qualifications and placement of employees. Evaluation is based not only on the regular efficiency ratings,

but also on any special reports by the employee's supervisor, the official in charge, the regional director or a project leader who has knowledge of the work and qualifications of an employee. The record includes any reports by the employee himself on special attainments such as graduate studies and research papers substantiated by recognized certificates. All these elements are considered when the qualifications of an employee come up for review.

Whenever a vacancy occurs in professional grades or top CAF or sub-professional grades, the normal procedure is for the Personnel Division to prepare a list of 5 to 10 top candidates and route it to the division heads directly concerned for their comments and recommendations. The list is made up of: (1) those in the same grade who have expressed preference for the position or who are due for placement following termination of previous position (provided their records are good); (2) those in next lower grade whose records are outstanding as determined by efficiency rating, specialized training and experience, or top listing in the "promotion panel", a listing determined by field and Central Office officials convened periodically for the purpose; or (3) those who have outstanding special qualifications for the particular job, e.g., a research position, or are listed for consideration by a project leader who believes they have special qualifications. In every case, effort is made to examine the list of all eligibles (same grade or next lower grade plus those with outstanding qualifications by general recognition) and to select for consideration the 5 to 10 top candidates by grades. If after review by the division heads and Assistant Chiefs of Bureau, etc., there is common agreement as to the best qualified candidate, the recommendation is sent to the regional director for consideration and the Chief of Bureau for authorization.

If there is not agreement on the selection at any stage, the list is re-routed or a meeting of project leaders concerned (usually division heads, Assistant Chiefs and Chief of Bureau) may be called to reach a consensus. In any individual case, two or more of the stages may be reversed, that is, the nominations by a regional director, a district forecaster, an official in charge, etc., may be obtained in the beginning, if the circumstances so indicate, or new nominations may be called for because of unavailability of those first listed or their unwillingness to accept the assignment.

Careful consideration and, frequently, long reconsideration goes into the selection of employees to fill important vacancies and the primary aim in every case is to make the best selection from the viewpoints of the good of the service and the interests and welfare of employees as a whole.

APPROPRIATION FOR FISCAL YEAR 1950

The regular Weather Bureau appropriation for Fiscal Year 1950 became available July 20, 1949, when Public Law 179 was approved. Between that date and the end of Fiscal Year 1949 on July 1, funds had been made temporarily available for payment of salaries and other operating expenses by a Joint Resolution passed by Congress and approved by the President. Bureau expenditures proposed for this fiscal year, as compared with those for last, are as follows.

	1949	1950
Salaries and wages	$17,972,000	$18,181,000
All other expenses	5,888,000	5,998,000
Total appropriation	$23,860,000	$24,179,000

Although it may be seen that the total appropriation this year is $319,000 greater than last year, this increase is not sufficient to cover certain added expenses during the coming year, over which the Bureau has no control. These include (a) a portion of the $330 pay raise effective July 11, 1948 (last year the Bureau did not have to meet this cost for the first 10 days of July, but this year the costs must be assumed in full); (b) within-grade (Ramspeck) promotions; and (c) establishment of a new station at Scottsbluff, Nebr., two radiosonde stations in the Hawaiian Islands, and a special climatological study, all required by Congressional directives in the appropriation act. Thus, the Bureau will be unable to improve field staffs or grades except by adjustments to offset costs in every instance by decreased costs elsewhere.

Annual estimates submitted by each field station last spring were used to determine the total of the appropriate regional allotments. However, in no case has it been possible to establish regional allotments equivalent to the total of all station estimates for the region. Bureau-wide, the total of all requests in the form of estimates (station and Central Office) for expenses other than salaries was more than $800,000 in excess of available funds. Nevertheless, with an appropriation of more than $24,000,000 the Bureau can continue to maintain its field establishments and render an effective public service, even though it will be necessary to exercise economy in operations and to defer some highly desirable expenditures.

ARMSTRONG MAKES INTERN PROGRAM

Only employee in the Department of Commerce to be chosen for the 10th Federal Administrative Intern Program was Lorenz C. Armstrong, field aide from the Los Angeles Re-

gional Office. Beginning September 6, Mr. Armstrong will enter a five-month program of university study, rotating work assignments in various Federal agencies in Washington, professional meetings, and weekly seminars with outstanding administrative officials.

A group of 14 interns was selected for the 10th Program, which for the first time was limited to employees in grades CAF-7 to CAF-11 or equivalent grades. In previous programs employees up to the grade CAF-9 or P-3 were eligible.

RADAR PROVING VALUE

Radar weather observations in the western plains area are providing pilots, forecasters, and the general public with highly useful information, reports Vaughn D. Rockney of the SF&MO Division. At Wichita Falls, Tex., for example, radar reports one day in May helped guide an airplane in distress out of severe thunderstorm activity. At another time the reports warned the inhabitants of Hobart, Okla., of an approaching tornado.

Mr. Rockney in June made a trip to this area and to the Gulf Coast to inspect present radar installations and arrange for the establishment of new sets in preparation for the 1949 hurricane season. Radar sets had previously been installed at Norfolk, Nebr.; Wichita, Kans.; and Wichita Falls, Tex. (A fourth set is located at Washington National Airport). Mr. Rockney arranged for a Weather Bureau installation at Brownsville, Tex., and advanced the arrangements for use of cooperative installations at Freeport and Victoria, Tex., and Grand Isle, La.

Stations are encouraged to give the fullest possible use to radar reports, and examples of their use and specific value will be appreciated by the Central Office. All comments should be addressed attention SF&MO Division, Observations Section.

ASSISTANT PRINTING FOREMAN RETIRES

Samuel B. Lapin, assistant foreman of the Printing Section composing room, and who until the July issue usually set up the type for TOPICS each month, retired July 31. He had been with the Printing Section since 1920 and was known by nearly everyone in the Central Office. Because his 61st birthday fell on July 30 the gathering to bid him goodby on his last day of work became also a birthday party. He was presented with a savings bond which was bought by the contributions of friends. Mr. Lapin was born in St. Louis, Mo., in 1888, and followed the printing trade for several years before joining the Bureau. He served in the Army during the first World War and was overseas with the AEF.

His address upon retirement is 2520 L Street, NW., Apt. 401, Washington 7, D. C.

SPECIAL SALARY INCREASES FOR THREE

Within-grade salary increases "for superior accomplishment" have been approved for three Weather Bureau employees by the Bureau Employee Awards Committee and the Department of Commerce Employee Awards Board. These employees are Robert A. Halverson, J. Norman Johnson, and Glenn M. Miller. The increases are in addition to those normally earned.

Mr. Halverson, supervising electronics technician in the Seattle Regional Office, was recently given a Meritorious Service Award for superior performance. His efficiency rating for the past three years has been "Excellent" and he has carried on many original investigations on his own time and initiative. He has been sent on special assignments to other regions and his services have been used by the Air Force in Alaska. The within-grade increase was recommended because of his unusual interest in improving the overall efficiency of our costly electronics equipment.

The Employee Awards Committee occasionally finds that suggestions are received and adopted, but the employee submitting them cannot be given an award because the suggestions fall within the requirements of his position. Mr. Johnson, meteorological aid in the Chicago WRPC, has made several such suggestions. His suggestions have been adopted and are saving money for the Bureau. A cash award could not be given him because the suggestions have all fallen within the type of work for which he is being paid, but his superior work is recognized by a special salary increase.

Mr. Miller organized the Radiosonde Reconditioning Center at Joliet, Ill., and has been operating it with high efficiency and large savings to the Bureau. The production record of the center is noteworthy and the reconditioned radiosondes have performed as well as new instruments. Mr. Miller's record was recognized recently with a Meritorious Service Award, but in addition he was awarded a salary increase.

HURON SECTION DIRECTOR SELECTED

Robert V. Lawrence, former assistant regional director of Region V, in June became OIC at WBO Huron and section director for the State of South Dakota. He succeeds Bernard R. Laskowski, who retired April 30 (see May TOPICS).

Mr. Lawrence, who is 50 years old, has been in the Bureau since April 1918. His first job was laborer and temporary assistant observer at Royal Center, Ind., where he remained for 5 years. In June 1923 he transferred to the Central Office for a 2-year stay and then returned to Royal Center in 1925. Four years later he was made first assistant at the Omaha airport station, and from 1923 to 1937 was official in charge.

He followed his old OIC at Omaha, V. E. Jakl, to Kansas City airport station in 1937 as supervising airway forecaster. With regionalization he became executive assistant at the new Kansas City Regional Office in 1942, and later assistant regional director.

At Huron Mr. Lawrence is in charge of a section center for a State 77,047 square miles in area, with a total annual farm income of about $330,000,000. Reports from about 115 cooperative observers are checked, analyzed, summarized and published. Also under his supervision is a separate airport station with a surface and upper air observation program, and which furnishes local aviation service. In addition to general weather service, WBO Huron prepares specialized forecasts for shippers of perishables, for agriculture, industry, and public utilities.

COMMUNICATIONS SUPERVISOR RETIRES

Jean H. Gallenne, who has been in charge of the Central Office Communications and Bulletin Unit since it was first organized in 1941, retired June 30 after nearly 40 years with the Bureau. Mr. Gallenne first joined the Bureau in September 1909 as a messenger in the Central Office; his service was all in Washington. At various times during his career he was a folder and feeder in the Printing Section, clerk in the Climatological Division, and scientific aid in the Climate and Crop Weather Division. When the communications unit was organized in 1941 he was placed in charge.

This unit is the center in Washington for the collection by teletype of weather reports from all over the country, including reports from ships at sea. Seventeen teletype circuits, including PBA, TWX, Western Union, and CAA bring in and disseminate such reports as the NSS broadcast of weather which goes to the Navy Radio Central for transmission to the North Atlantic fleet, WBAN analyses, regular weather reports, and administrative messages. The unit monitors the 17 circuits and reviews the material received for suitability to U. S. circuits and exchanges with foreign meteorological services.

Mr. Gallenne's address is 4311 Alton Place, NW, Washington 16, D. C.

MRS. MARY WHITE RETIRES

Mrs. Mary K. C. White, clerk in the Instrument Division, retired on July 1, 1949, because of poor health, with over 28 years of Government service, 24 of which were with the Weather Bureau. Mrs. White entered the Bureau on November 7, 1924, by transfer from the Census Bureau and with the exception of approximately 1 year, spent in the New York Regional Office, her entire service has been in the Central Office.

WARREN HEADS UP ALBUQUERQUE

Albuquerque, N. Mex., has a new OIC, Leslie A. Warren, former assistant regional director of Region VI. He replaces Donald C. House of the Central Office International Aviation Section who was acting OIC for several months.

Mr. Warren was not quite 17 when he took a job as messenger in the Kansas City station in June 1915. Four years later he transferred to the Broken Arrow, Okla., kite station as first assistant. He stayed there only a few months, however, before moving to the Groesbeck, Tex., kite station, also as first assistant. In October 1920 he became OIC at Ellendale, N. Dak., and stayed until 1929. Then for a year he was in charge of the Cheyenne, Wyo., airport station, was transferred to the Kansas City airport station as first assistant, where in 1935 he moved up to OIC. When the Bureau decided to organize a new airway forecast center at Billings, Mont., in 1939 Mr. Warren was selected for the job. Again, when the Bureau was regionalized, he was selected for the post of executive assistant to the Regional director of Region VI and in 1942 moved to San Francisco and then to Los Angeles when the regional office was transferred there.

As official in charge of the Bureau's activities in the Albuquerque area, Mr. Warren will be responsible for a program of general and aviation weather service for an area population of about 120,000. The office is an airway terminal forecast center for 15 airway terminals in Texas, New Mexico, and Arizona. It carries on a complete surface and upper air observational program. Mr. Warren will be section director for the State of New Mexico and will supervise a network of about 250 climatological substations, and he will conduct a river district service for the Pecos River in New Mexico, the Rio Grande River and tributaries from headwaters to the Elephant Butte Reservation Dam, the Canadian River and tributaries in New Mexico, and the San Juan River and tributaries in Colorado and New Mexico.

DO YOU KNOW YOUR JOB SHEET?

One of the basic principles of good management is that responsibilities should be specifically assigned and understood by all concerned. It is most important that someone be clearly assigned responsibility for doing every job that needs to be performed to fulfill the objectives of a given program. Nothing encourages "buck-passing," recrimination, and jurisdictional conflict more than unclear assignments of responsibility for particular tasks.

Every job in the Federal Government covered by the provisions of the Classification Act of 1923, as amended (and this includes practically every job in the Weather Bureau), has

been defined by a "position description" (or "job sheet"). This is available to the employee, and each employee should know in detail the provisions of his job description. With duties clearly defined and understood by employee and supervisor alike, it is possible to judge whether minimum work requirements are being met, and beyond that, whether performance is passable, average, or outstanding.

Career employees should always view their job sheets as the minimum basis on which to start doing a good job. The employee who regards his job sheet defensively and stands on it to avoid sharing teamwork that may call for more than usual effort and the temporary acceptance of additional duties and responsibilities tags himself as unprogressive and uncooperative. This is a poor way to grow into a bigger job.

The job sheet is a man's "charter to work," a minimum blueprint of position in the scheme of organization. By knowing it well, he has the basis for effective performance of his duties, and especially for gearing himself into the "teamwork of organization."

BINGHAMTON OIC RETIRES

Harold K. Gold, official in charge at WBO Binghamton, N. Y., retired July 11 because of ill health. He had been in charge at Binghamton for about a year. Mr. Gold, who is 42, first joined the Bureau as a junior observer at Scranton, Pa., in December 1928. The following April he was transferred to New York for a little over a year and then to Binghamton as first assistant. This assignment lasted 7 years, until June 1937. From that date until January 1940 he was official in charge at Oswego, N. Y. An opportunity to attend classes in air mass analysis and to do research work with the Hydrometeorological Section took him into the Central Office, where he remained until November 1946. Mr. Gold then transferred to WBO Harrisburg as principal assistant. He took charge at Binghampton in April 1948.

Mr. Gold is at present receiving hospital care, but his address is No. 2 Curran Avenue, Binghamton, N. Y.

LAMP DANGER SUGGESTION ADOPTED

For his alertness in suggesting that the danger from broken flourescent lamps be given Bureau-wide publicity, Wilbur F. Pearson, meteorological aid at WBO Orlando, Fla., has been awarded $15 by the Employee Awards Committe and commended by the Chief of Bureau. Mr. Pearson's suggestion anticipated official notice by both the Bureau and the Department of Commerce concerning the danger from the chemicals in the light tubes. Circular Letter 60-49 was issued to warn all Bureau personnel of these hazards.

OBSERVATIONAL RESPONSIBILITY

On occasion, Weather Bureau employees have given the impression to the public that the Bureau has no control over observations reported by other than its own commissioned personnel. While it is true the Bureau possesses no administrative authority over anyone except its own employees, it does have responsibility for control over the quality of all observations accepted for transmission.

This control is maintained through certification and regular inspection of personnel at all stations taking observations, whether manned by Weather Bureau personnel or not. The CAA cooperates fully with the Bureau in taking remedial action whenever a weak observational program of its own personnel is called to its attention. The certificate of any official observer can be revoked whenever individual performance drops below accepted standards.

Under no circumstances should Bureau employees speak disparagingly to the public of the observational work of CAA or SAWRS personnel. If the accuracy of observations taken by such personnel is questioned, the matter should be reported to the Central Office, where action to remedy the situation will be taken, but the criticism should not be voiced elsewhere.

AVAILABILITY OF INSTRUCTIONS

One Weather Bureau employee stands to be out of pocket a considerable amount because he was not aware of instructions in the Weather Bureau Manual covering travel and transportation of household goods. On an official transfer he paid cash for tickets and shipped household goods by express, also paying cash. Because he did not know what is permissible in such cases he cannot be reimbursed. It appears that the Manual had not been made available to him.

A number of other cases where employees did not have access to instructions have come to the attention of the Central Office. The Weather Bureau Manual and other administrative instructions are meant to be read by all employees concerned. Supervisory officials will see to it that such instructions are available to every employee, and will call attention specifically to regulations which may effect him personally, as in the instance cited.

SUGGESTION TO SAVE $2,400 ANNUALLY

Inclusion of the radiosonde computation data contained in WBAN Form 30 on adiabatic chart Forms 31-A and 31-B, as suggested by John C. Nyhan, meteorological aid at WBAS Phoenix, Ariz., is expected to save the Bureau an estimated $2400 annually. Mr. Nyhan received a $100 award and commendation from the Chief of Bureau for his proposal to abol-

ish WBAN Form 30. Before adoption, the idea was tested in the field by issuing a small supply of the consolidated forms to selected stations for use during the test period. When their use proved satisfactory, the approval of the associated weather services was obtained (not only Weather Bureau but the Air Force and Navy were concerned), and the new forms were adopted.

PIREP PROGRAM BEING EXPANDED

Within the near future the volume and quality of in-flight weather reports available to the Bureau from pilots is expected to materially improve. In cooperation with the C A A, a more comprehensive program of collection, use, and dissemination of PIREPS is being developed. The Air Transport Association, the National Association of State Aviation Officials, and the Aircraft Owners and Pilots Association have been requested to solicit, through their respective organizations, the cooperation of pilots in making more and better weather observations by pilots promptly available to the Weather Bureau or CAA.

The PIREP, when properly handled, is a most effective means of expanding our observational program, and in many cases it is the only practical way to check on the actual state of the clouds and weather en route or at isolated airports. All offices are urged to take careful notice of these supplementary observations and to post the PIREPS promptly so they may be used in pilot briefing or be reviewed by the pilots themselves. Whenever authorized and required by standing instructions, the information received through PIREPS should be promptly disseminated by radio or teletype.

SUGGESTION CUTS TELEGRAPH COSTS

John T. Cobb, technical assistant at WBO Chicago, has neen awarded $35 for his suggestion that during the open season of navigation on the Great Lakes, Weather Bureau Offices should not receive a complete storm or small craft warning by telegraph if the time of issue is that of a standard forecast. Since Service "C" transmission is now faster than telegraph transmission, the greatest value of the latter is to avoid nonreceipt of warnings because of circuit trouble, garbling, etc. The procedure installed as the result of Mr. Cobb's suggestion provides that the telegram at the time of the standard forecast be confined simply to the order to post warnings, If the Service "C" transmission is garbled, the office is instructed to call a nearby office or the district forecast center. The difference in cost of telegrams is estimated to amount to more than $600 annually.

WALSTROM MOVES TO CINCINNATI

Now in charge at WBO Cincinnati is Arthur W. Walstrom, formerly assistant regional director of the Chicago Regional Office. Cincinnati was under J. Cecil Alter until his retirement on March 31. John H. Eberly, assistant to the Chief of Bureau, was acting OIC during the interim period.

Mr. Walstrom began his career in the Bureau at Alpena, Mich., in August 1922, moving to Detroit in 1924. From 1927 to 1930 he was out of the Bureau working as a meteorologist at an automobile proving ground in Detroit. In April 1930 he returned and was assigned as OIC at the Detroit airport station. Two years later he moved to the Detroit city office as first assistant and stayed in that position until 1941. With regionalization he transferred to the new Chicago Regional Office, and later became assistant regional director.

As official in charge at Cincinnati, Mr. Walstrom will be responsible for a general weather service program to a population of about a million. He will also supervise a FAWS unit and a separate airport station at the Kenton County Airport across the Ohio River in the suburbs of Covington, Ky. The coordination of these offices will be one of his most important responsibilities. The city office is also an important river district center which issues forecasts of floods and river stages to a river service area with a population of about 2,630,000. Flood damages in the area run to an annual average of nearly 11 million dollars.

PRINTING CHIEF DIES IN WASHINGTON

John E. Voll, since 1946 head of the Printing Section in the Central Office, died July 3 after an extended illness. He was buried in Shelbyville, Ind.

Mr. Voll was born in Louisville, Ky., and moved with his parents to Shelbyville at an early age. From 1910 to 1912 he was a reporter and from 1912 to 1916 worked as a printer and foreman of a printing plant in Indiana. Entering the Army in 1916 he was commissioned a second lieutant in the Quartermaster Corps in 1917. He remained in the Army until 1919 when he came to Washington and took a job as personnel clerk in the War Department. The next year he joined the Weather Bureau as a lithographer and compositor. He attended George Washington University for three years and then took his law degree from the National Law School in Washington in 1926. He qualified for the Indiana bar and was licensed to practice in that state.

Mr. Voll is survived by his wife, Mrs. Alice S. Voll, also an employee in the Central Office; a brother, Robert T. Voll of Indianapolis; and a sister, Mrs. Helen Van Lue of Albuquerque.

LORENZ FILLS NEW KCRO JOB

First incumbent of the newly-established position of administrative officer in the Kansas City Regional Office is Alfred L. Lorenz. Mr. Lorenz, a former field aide in the Atlanta Regional Office, recently completed a 5-month period of training in the Ninth Federal Administrative Intern Program.

A native of Dubuque, Ia., Mr. Lorenz came into the Bureau in 1930 as a junior observer at Madison, Wis. From there, in 1936, he went to Pensacola, Fla., and then, after a few months, to Lakeland. Asside from a 6-month assignment to Jacksonville in 1937, he remained at Lakeland, in fruit-frost work, until his transfer to Atlanta as a field aide in 1944.

At Kansas City, Mr. Lorenz will fill a position comparable to that of administrative assistant in other regions but which has assumed increased importance because of the consolidation of the regions.

CELLOPHANE SAVES TIME AND TEMPER

Instead of preparing the graphs on the Washington Graphic Record with ruling pen and ink, the Daily Map Unit in the Central Office now uses strips of cellophane, waxed on the back side, with lines already affixed. Thus, when a bar graph of a particular length is desired, the cellophane is cut to the desired lengh and stuck to the graph by means of the wax. This not only saves time in preparation, but it allows less experienced employees to prepare the graph, and eliminates the messy appearance which correction of inked lines sometimes causes.

This change in procedure was brought as the result of a suggestion by William A. Deck, meteorological aid in the Daily Map Unit. Since devising such procedures is outside Mr. Deck's normal duties he has been awarded $15 by the Employee Awards Committee and commended by the Chief of Bureau.

HAZELWOOD GEAR PULLER ADOPTED

The design and development of a simple and effective tool for removing the azimuth gears from SCR-658 rawin equipment has brought a $50 award to William G. Hazelwood, electronics technician in the Fort Worth Regional Office. The "gear puller" has been adopted by the Instrument Division for use of other technicians. Because the puller will permit a technician to remove the gears himself without taking the equipment to a machine shop, an annual saving of over $500 is expected to result from adoption of the tool. Extra recognition of Mr. Hazelwood's initiative and ingenuity was granted in the form of a larger award than the actual savings called for, because he had designed the puller on his own time and had constructed a working model at his own expense.

GARRETT NEW TOPEKA SECTION DIRECTOR

Richard A. Garrett, born in Downes, Kans., 43 years ago, has returned to his native state as section director for the State of Kansas and official in charge at WBO Topeka. He succeeds S. D. Flora, who retired May 31. Mr. Garrett for the past two years has been supervising forecaster in the International Aviation Forecast Unit at WBAS New York (La Guardia Field).

Mr. Garrett entered the Bureau at Santa Fe, N. Mex. as a junior observer in 1927. Two months later he transferred to Denver for a 4-month stay and two months after that moved south to San Francisco. In April 1928 he became first assistant at the Oakland airport, a position which he occupied until 1931. In that year he resigned to enter the University of Colorado, receiving his degree in 1934. Not until April 1935, however, did he return to the Bureau, but worked for an airline as meteorologist in the meantime. Upon reinstatement, Mr. Garrett was assigned as first assistant at the Cleveland airport and continued there until 1942 when he transferred to La Guardia Field as first assistant. Among his accomplishments at La Guardia was organization of the FAWS unit there as the result of increasing demands during the war for improved service to aviation.

At Topeka, as director of an important section center and an outstandingly important river district center, Mr. Garrett will enter a new phase of his career. The section center supervises a network of about 250 climatological substations over an area of about 52,000 square miles which produces farm products of value averaging about $430,885,000 annually. The 7 river systems draining an area of 61,000 square miles cause an average of one flood per year with damage of about $4,000,000. Mr. Garrett will be responsible for giving leadership to a general weather service program for a local area population of 100,000. A separate airport station with a program of aviation service is likewise under his supervision.

INDIANAPOLIS CLERK RETIRES

Mrs. Katherine Kelley, clerk-stenographer at WBO Indianapolis, retired July 14 because of ill health. She has been in Government service for more than 11 years, but she entered the Weather Bureau at Indianapolis in 1939 by transfer from the Farm Security Administration of the Department of Agriculture. Mrs. Kelley remained at WBO Indianapolis the whole time of her Bureau service, and the official in charge has written, "We will miss her and her familiarity with the innumerable office details she has handled so well."

Her address is 3651 South Meridian Street, Indianapolis, Ind.

LIEURANCE GETS NEW ASSIGNMENT

Newton A. Lieurance, in the Office of the Assistant Chief of Bureau (Operations), has been designated "Aviation Weather Service Specialist". As assistant to D. M. Little he will be responsible for the leadership and coordination of the domestic aviation services. His job will be to keep top management advised of aviation trends and make recommendations so that a progressive aviation weather service will be maintained to meet the industry's needs insofar as funds and facilities will permit.

MERIDIAN OIC RETIRES

With more than 35 years of service, Gerald S. Kennedy, for the past three years official in charge at Meridian, Miss., retired July 31. A combined city office and airport station, WBAS Meridian serves approximately 44,000 in the local area, provides aviation service, and carries on a program of surface observations.

Mr. Kennedy was born in 1888 and joined the Bureau in 1914 as an assistant observer at Key West, Fla. He spent two years in Key West and then moved to Pensacola for 6 years. In 1922 he transferred to Grand Haven, Mich. for 9 months, and then returned to Pensacola for another 4 years. From 1927 to 1931 he was at Norfolk, Va., and then returned to Key West as official in charge. He took over at Meridian in 1946.

Mr. Kennedy's address is 3911 - 25th Avenue Meridian, Miss.

TWO OCEAN STATIONS DROPPED

Atlantic Ocean Station GEORGE, lat. 46° N., long. 29° W., was permanently discontinued on July 1, 1949.

The U. S. Navy disestablished Pacific Ocean Station BIRD DOG--4, lat. 11° N., long. 156° E. on August 1, 1949.

FORMER CAIRO OIC DIES

William E. Barron, official in charge at WBO Cairo, Ill., from 1918 until his retirement from the Bureau in 1941, died July 7 at his home in Appleton, Wis. Mr. Barron served more than 40 years with the Bureau and, except for 6 years in charge at Vicksburg, all of it was spent at Cairo. Prior to his entrance into the Bureau in 1901 he had been with the Post Office Department for 8 years, giving him a total of 48 years service with the Government. Additional details may be found in the September 1941 issue of TOPICS AND PERSONNEL.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

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WEATHER BUREAU

TOPICS

VOL. VIII SEPTEMBER 1949 NO 45

A MESSAGE FROM THE CHIEF OF BUREAU

A few months ago I suggested to the Office of Plans and Program Management, where TOPICS is edited, that "it would be worthwhile to . . . dedicate one issue during 1949 to our 'alumni' -- what they are now doing and perhaps something about their accomplishments in the past." Accordingly, we wrote to all our retired employees. The response was excellent, and we wish it were possible to publish the replies in their entirety. Space limitations prevent this, however, so that only excerpts appear on the following pages. We have tried to select portions of each letter that would be most interesting to other retired employees. We hope the writers will be indulgent if we have not selected parts they would prefer. Remarks from all who responded have been printed. A few did not reply. We hope to hear from them later.

It is appropriate to introduce these alumni letters by a few remarks of tribute and respect to those men who contributed so much to the fine traditions of integrity, devotion to duty, and unselfish public service characteristic of the Weather Bureau since its earliest days. Many of our alumni labored long and conscientiously in the days when the 40-hour week was unknown, the pay was small, and it was practically a "court-martial offense" to be late for an observation, even though the alarm clock had been set and failed to go off. It is reported that some young and conscientious observers even used two alarm clocks to make sure one went off. The Bureau was a "tough" school and these men learned their lessons well.

In those earlier days when our alumni made meteorological service history without benefit of telétype, graduate courses in meteorology, and other modern advantages, the science had not yet attained the recognition it deserved among the professional and technical services of the Government. Grades of its professional employees were very low and salaries correspondingly lower. We well appreciate the effect of these small salaries on retirement benefits. Their low purchasing power in these days of high prices must make many a retired employee wish he were back on active service for a time.

The pioneer days of the Bureau gave rise to many anecdotes and many instances of service "beyond the call of normal duty." Several years ago a number of these were collected, and we hoped Mr. E. B. Calvert would compile and edit them for publication. Unfortunately, Mr. Calvert passed on before he had opportunity to carry out this plan. He would have been just the one to author that volume, since he was among those who often "swapped yarns" at lunch time in the District Forecast Office in the old Main Building of the Central Office. It is a project that awaits the attention of some other worthy writer. There were stories illustrative of the economy and thrift that characterized the early days, and of devotion to duty in emergencies.

It is to these unfailing public servants -- our Weather Bureau alumni -- that we warmly dedicate this issue of TOPICS.

CLASS OF 1925

Man is concerned with the weather for many reasons. All of us must live with it, so everyone watches its effect on his comfort and convenience. Some love it for its beauty and majesty. Others observe and record its passage as an avocation. Still others find it a science worthy of lifelong study. But those who are concerned with it for a living find all these factors reinforced by the deep satisfaction of having served well their fellow men. Our alumni "graduate" from the Bureau class by class, year by year, but many continue as active students of the weather.

The men whose names were added to the list of Weather Bureau alumni during 1925 had just seen Calvin Coolidge reelected to the Presidency. The Bureau was still in the Department of Agriculture, and Charles F. Marvin was Chief of Bureau. Economy was the watchword in Government, and an attempt to increase the retirement annuity of employees covered by the recently-passed Classification Act had failed of passage in Congress. Airplanes were just beginning to replace the faithful kites in securing upper-air observations.

JULIUS C. HAYDEN, now 81, is the only surviving member of the 1925 class. He was one of the Signal Corps observers, having enlisted in 1889, and remained with the civilian service. Now living alone in San Francisco since the death of his wife last May, Mr. Hayden reports his occupations as simple:

> During the first years of my retirement I spent much time bass fishing. Now I can no longer do this and so have joined a model yachting club. This keeps me out in the open air and is very interesting.

CLASSES OF 1926 TO 1931

In 1926, the sesquicentennial year, the Bureau took part in the Philadelphia exposition celebrating the event; liberalization of the Retirement Act was finally accomplished; and another Act placed additional responsibilities on the Bureau for service to aviation. In 1927 the growing industry was highlighted in the public consciousness by Lindbergh's flight across the Atlantic. In the following year the first Byrd Antarctic Expedition was accompanied by Weather Bureau representatives. That year also saw the enactment of a bill increasing the pay of Federal employees. Although the country was in the middle of a business "boom", economy was the order of the day in Government. The year 1929 was notable for the stock market break and the end of the boom, leading later to further retrenchment in government expenditures. The airplane "Question Mark" set an endurance record, and its commander, later to achieve fame in World War II, warmly thanked the Bureau for its part in making this possible. The lusty trans-

portation infant aviation was making itself heard in the country, bringing about changes in Weather Bureau operations to safeguard it; among other things the teletype was replacing the trusty telegraph for Weather communications. By 1931, the depression had made serious inroads on the Bureau's plans for expanded service. We regret that the classes of 1926, 1927, 1928, 1929, 1930 and 1931 (if our records are correct) no longer have representatives.

CLASS OF 1932

The world in 1932 was in the middle of the worst depression in modern history. Its effects on the Bureau were felt in the form of reduced appropriations, and each employee was required to take a "legislative furlough" of 24 days without pay during that year. The Division of Climate and Crop Weather was formed from the consolidation of two other divisions. The Bureau cooperated with many other agencies in a program of studying auroral phenomena (perhaps because that was a bright spot in the dark sky of depression). Of the alumni still representing this class, we have heard from two.

CHARLES T. SHAFFER, another of the original Signal Corps men, enlisted in 1889, is now 81, lives in Elma, Wash., and is active in religious work. Secretary of the Gospel League of the Commonwealth of Israel, he has written since his retirement a number of books on Biblical and religious subjects.

THOMAS R. TAYLOR, whom the records indicate is our oldest alumnus, having been born March 6, 1861, has been in a hospital in Hollywood, Fla., this summer and was too ill to write. Mrs. Taylor, however, tells us that he has been in poor health since being struck by a motorcycle in 1940. He has made a hobby of gardening and raising chickens, Mrs. Taylor says.

CLASS OF 1933

Instead of a furlough without pay, employees were required in 1933 to take a flat 15 percent reduction in pay. A number of stations were closed and others had their programs curtailed. The last of the old kite stations, Ellendale, was closed and the kite and captive-balloon observation program was discontinued in favor of airplane observations. Four of the men from this class have answered our inquiry.

LOUIS LODHOLZ, now 82, who joined the Bureau in 1899 and served at a dozen stations, at two of which he was in charge, writes us:

> I have traveled considerably -- above five times to Europe, two of these voyages as far as Egypt and Syria. Once to the South Seas, New Zealand and Australia. Recently I have become enamoured of air travel and have already crossed the continent four times. . . . Hobbies -- a keen interest in geology,

more especially in historical geology with its fascinating accounts of the various changes in topography and climate that this earth has undergone in the past. I am very much interested in the new nuclear physics that everybody seems to be interested in nowadays.

WILLIAM W. NEIFERT spent 48 years with the Signal Corps and the Weather Bureau, and was OIC at several stations, last of which was Binghamton. He is now 84, and lives in the Masonic Home at Charlton, Mass.

The great hoped-for release from official work terminated rather suddenly after several years by the serious illness of my wife, from which she never fully recovered. . . . Thus of course ending our happy home for the past 58 years, and which . . . necessitated my remaining at this Masonic Home. . . . . My entire income (consists) of the annuity to which fund I of course contributed each month while on active service, and (a pension from) the 1886 Apache Indian campaign in the Arizona mountains -- locally Mount Baldy . . . at an elevation of 7000 feet, so informed, for the only information I received at the time -- and retained thus far -- is the fact that it was a hard, rocky climb, decidedly above the timber line which the great Chief Geronimo and his tribes would not climb for an attack, preferring to remain in the valley and there attack inhabitants and make use of the livestock, especially cattle for food, at least that was the opinion of the military at the time.

LEON G. SUTTON, although still only 66, retired after 33 colorful years with the Bureau, 31 of which were spent in the Pacific Northwest. For him, retirement has meant a change of work, but he is still a weatherman at heart.

At present I am employed as passenger and freight transportation agent at Port Angeles . . . . The work is very interesting as I come into daily contact with local business men and the traveling public. I still maintain acquaintanceship with pilots and ship and tug personnel who tie up their boats at our docks, some of whom still call me "the weatherman." . . . I still consider myself close to the Weather Bureau "clan", having taken up the weather more or less as a hobby. I have been cooperative observer at Port Angeles since I retired to the present date . . . . I also care for the hydrological rain gage and Mrs. Sutton is the local storm warning displayman. The Port Angeles climatological records are in my care and I furnish data and weather stories to the newspapers and the public. Have talked weather over the radio and to the several service clubs.

GEORGE B. WURTZ, another Signal Corps veteran, enlisted in 1890 and transferred to the Bureau. Now 78, he has found interests in industry "a solace as well as a vocation."

Through the blandishments of a good salesman at the time of my separation I held a small interest in some oil leases in the Kentucky oil fields, and naturally went there in my vacation to see what I had. . . . By reason of my relief from other vocation, I was put in charge of like holdings held by others as well as myself. And, in the interests of the group, I took over the job of making fractional holdings like my own develop into actual production. . . . Strangely, the knowledge of mapping weather pressures and contours helped splendidly to comprehend the relations between surface terrain and the relation to underlying deeper structures, leading to the selection of drilling sites. . . . To date one may not claim a place amongst the "oil barons," but still he can feel it has been worthwhile and that he is even with the game. And what a game it was! Almost as interesting as mapping and predicting the weather!

CLASS OF 1934

A new Chief of Bureau, W. R. Gregg, took the helm in 1934. The former Chief, C. F. Marvin, stayed on for a few months as an advisor, and then retired. Of the 15 percent pay cut the previous year, 10 percent was restored. This was also the year the Army Air Corps flew the mail. The Weather Bureau received a commendation for its assistance to the Air Corps in this project.

SAMUEL P. PETERSON, the only man of this class to answer our call, was born 72 years ago in Norway and spent 28 years with the Bureau; he was OIC at La Salle, Wichita, and Albuquerque. Since retirement, he says:

> My activities have been confined mainly to my home, trying to keep it in good shape. . . . I have made a few journeys. . . but not extensive ones. . . . Much of my time is spent reading. Newspapers take first place and scientific books come next. I have also spent some time almost every day writing, though I have not yet offered anything for publication.

CLASS OF 1935

A new means of transmitting weather information, wirephoto, was coming into use and the Bureau began furnishing weather maps to be transmitted over press association wires. The final 5 percent of the salary cut was restored. The hurricane service was reorganized and expanded. A program of training in air mass analysis was inaugurated, with the famous Dr. Sverre Petterssen lecturing in Washington. The Mount Washington Observatory was established in cooperation with Harvard University. Three old-timers from this class have written extensively of their activities.

DR. ISAAC M. CLINE, who celebrates his 88th birthday in October, gave 53½ of those years to the Signal Corps and the Weather Bureau. Dr. Cline was best known for his hurricane warning and river and flood work. His book, Tropical Hurricanes, is a classic in the literature of the subject. He continues actively at work at his home in New Orleans where he served for 34 years.

> Before I retired I recognized that unless I found congenial work where I could meet people my life would be a burden. I had used my annual leave in short periods to collect paintings of Americans by American artists which I restored and preserved from ruin. Some of these are in the Mellon Collection in the National Gallery of Art, Washington, D. C. During this time I also prepared myself for a business after retirement. The day after I retired I opened a small store stocked with glass, fine porcelains, furniture, and some paintings. . . . In 1944 I wrote my memoirs, Storms, Floods, and Sunshine, the first edition of which was published in 1945. . . . I am now preparing for Part II of the third edition of my memoirs, Characteristics of Tropical Cyclones, summarized from my book, Tropical Cyclones, 1926, in a popular style for the general reader and also for those looking for special features of these atmospheric disturbances.

EUGENE F. HARTWELL, OIC at San Juan for a number of years before retirement, decided to change his environment entirely. Now 76, he tells us:

We came up here in the woods of northern Vermont, and put in a small printing plant for hobby work and a possible kopec or two on the side. Printed a little poetry magazine for a literary group in Burlington six issues a year for four years. . . . When the CAA put on its program of teaching ambitious young men and women to fly, I was taken on by the University of Vermont to teach meteorology. . . . This went on until the war broke out and I volunteered to take a part in the Masonic Service Association. . . . Both Mrs. Hartwell and I worked in recreation centers operated by that organization. . . until August 1947. . . . Being 74 years of age, we "retired" again, and took a long-projected tour across the country. . . . Stopped in Washington last December on the way to Florida, and called on our old "boss" in the Association office, who asked me to look into the Veterans Hospital at Lake City, Fla., with a view to opening a visiting center there, with the result that I took it over and stayed with it until May 1 of this year, after getting a competent eligible 20 years younger than I to take over.

DR. WILLIAM J. HUMPHREYS was already a distinguished physicist when he came to the Bureau in 1905. In the 30 years that followed he made numerous contributions to the advancement of our understanding of atmospheric phenomena, one of the most noteworthy of which was his explanation of the existence and the principal characteristics of the stratosphere. One of his most valuable services to the science of meteorology was the publication of his comprehensive treatise, Physics of the Air. A long list of papers, and several other books, resulted from his work with the Bureau and established for him an international reputation. Since his retirement in 1935 . . .? Let him tell it.

Well, the first thing I did was to thank the then Chief of Bureau, Willis R. Gregg, for having me appointed collaborator, and thereby retaining me as a member of the Bureau's staff. Since then I have published 25 papers, most of them meteorological. . . . In addition to these papers, several books have appeared over my name during that same period. (1) In 1937, Weather Rambles, an illustrated book of 265 pages; (2) in 1940 the 3rd edition of Physics of the Air, somewhat enlarged, 676 pages; (3) in 1942, Ways of the Weather, an illustrated book of 400 pages and a moderately full discussion of meteorology without the use of mathematics, essentially a cultural treatment of the subject; (4) in 1943, Fogs, Clouds, and Aviation, essentially a second edition of my earlier book, Fogs and Clouds, which was then out of print (illustrated 200 pages); (5) in 1947, Of Me, my autobiography. . . . Some of my time has been given to attending the meetings of scientific societies and taking part in the discussions at these meetings. I also have taken an active part in the work of the Cosmos Club -- President of the Club in 1936, and chairman of its entertainment committee and continued chairman of such until the end of January 1946, the duty of which is to provide some 20 or so lectures each year by eminent scholars on topics of general interest.

CLASS OF 1936

The Fire Weather Service was expanded as the result of increased appropriation for the purpose, and a project was

inaugurated for releasing sounding balloons, to which small meteorographs were attached, during hurricanes. A survey of Bureau positions, for purposes of reclassification, was begun.

BARTHOLOMEO T. BERTETTI entered the service in 1919 at the age of 17 and was retired at the age of 35 with nearly 19 years of service, on complete disability because of blindness. Because of this condition, retirement has been somewhat more confining for him than for most.

> Due to the fact that I am confined indoors, I have found much enjoyment in studying Braille, and listening to "The Talking Book." This Talking Book is made available by the Library of Congress, by the U. S. Government, under the supervision of the American Foundation for the Blind, and is in my estimation a very valuable asset. . . . I also listen to all the weather news that is broadcast in our city (San Antonio), and beleive that much improvement has been done in weather forecasting. I listen to baseball games, sports events, and to all the news that is broadcast, as radio is my next means of keeping up with all the news events.

MARTIN B. STUBBS was born in Austria in 1866. He joined the Weather Bureau in 1901, and now lives in Wichita, Kans., where he was in charge at time of retirement.

> As to keeping busy, I have plenty of fine magazines. . . . Also I have plenty to do between trips in summer to pull that derned Bermuda grass out of my little garden and grass plots. . . . We own a little V-8, not the latest or very stylish, but sturdy and able to take us anywhere with safe driving. After retirement went to Los Angeles, Yosemite, the Big Trees, San Francisco Bay from the south, out over that wonderful suspension bridge to Sacramento, Lake Tahoe and on No. 40 to Salt Lake City, Grand Junction to Pueblo and Wichita; also a trip with wife and granddaughter to Carlsbad Caverns. Also trips to Minneapolis, Chicago, Wichita Falls, Washington, Philadelphia, Boston, Portland and home via Niagara Falls.

CLASS OF 1937

Reorganization of the Executive Branch of the Government was in the news as the President's Committee on Administrative Management completed its studies. Also of interest during the year was the meeting of the International Meteorological Committee in Salzburg, Austria, attended by several Bureau officials.

WILLIAM H. ALEXANDER is the only living alumnus of the 1937 class. He served the Bureau for 39 years, 21 as OIC at Columbus, Ohio, and is now living in Cumby, Tex.

> Since that eventful day in 1937 I have been a "free lance" and have found life very, very happy and surprisingly rich in opportunities for service, entertainment, and helping my fellow man in my humble way -- the greatest joy of all. Immediately upon retiring we (Mrs. A. and I) gave up our home in Columbus, put our stuff in storage, and began a sort of gypsy existence. . . . Finally, however, after some eight or ten years of this kind of existence we grew tired of it and yielding to that apparently innate feeling or longing that seems so deeply implanted in the human heart and grows keener as one faces the sunset of life, we decided to return to the "scenes of our childhood," which for me meant Texas, for Mrs. A., Florida. We compromised on TEXAS! . . . My hobby, however, if I have any, is the radio. What a blessing this is to the shut-in and the unemployed, this miracle of the age. Entertainment, information, travel, diversion, even employment, all in one, the

radio is! Then add television and what more can one ask? With it how can one live a bored life? Yes, each day brings its own good time and I am most satisfied to sit on the sidelines and watch the world go by!

CLASS OF 1938

With the death of W. R. Gregg in September, the Bureau completed the year under two Acting Chiefs, first the Assistant Chief of Bureau, Dr. C. C. Clark, and then later, on detail from the Navy, Commander F. W. Reichelderfer. Under the Civil Aeronautics Act of this year further responsibilities for aviation service were laid on the Bureau, and it was authorized to send some of its promising employees to selected universities for advanced training in meteorology. We have received four answers from weathermen of this class.

GEORGE E. GRIMES enlisted in the Signal Corps in 1887 and spent the next 51 years with the national weather service. Upon retirement he quickly took up other work:

Within a few weeks (I) became a member of the Board of Assessors of Nantucket Island, where I have continued to the present time. . . . Other than my duties here, I have my garden, live a semi-retired life, and at the age of 80 find myself very active and very well in health. . . . For recreation I stop in daily at my club, where I associate with others in similar administration service, and while away an hour or so in a few games of pinochle.

RICHARD HEINE had to contend with poor health throughout his Bureau career, and finally, after 18 years, found it necessary to retire because of it. In retirement he has kept up a number of interests:

I have been occupied with health measures, housekeeping, business affairs, and the care of my old and sick parents. . . . My recreation lies in astronomy, meteorology, literature, and painting. . . . I have never married.

ERNEST K. LOVETT also retired for health reasons. He entered the Bureau in 1925 at Helena, and was later OIC at Kalispell. Now living in The Dalles, Oreg., he tells us:

I have no hobbies except photography. I gave up radio as a hobby during the war when materials became scarce. I have to go easy on what income I have and do my own developing and printing. Taking pictures is a real pastime for me. I am limited as I have to depend on friends to visit the scenes of interest. I have been to Mt. Hood and have a few negatives I have not yet printed. On two visits to Mt. Adams, in Washington, the sky was too cloudy for pictures, but the outing was enjoyed.

ROSCOE NUNN, who joined the Weather Bureau on the day of its birth as a civilian agency, July 1, 1891, still keeps busy in Kirkwood, Mo. at the age of 81. (He was OIC at Nashville, Baltimore, St. Louis, and Denver.)

Having always been a handy man about the home, I increased those activities, with more gardening, keeping things in repair, etc. My principal hobby is gardening, mostly flowers and lawn. . . .I have an aneroid barometer, a minimum therometer, and a home-made rain gage. I do not record temperature, but keep 6 a.m. and 10 p.m. barometer readings temporarily, and I keep the precipitation records on file. . . . My important work since retirement consisted of service as church treasurer in a large parish (now relinquished) and work with the Selective Service System, which I began in October 1940 and continued until July 1946. I

was chairman of the local draft board for six years, and that was a time-consuming and mind-taxing job. I am still in public service in a small way, being secretary of the Kirkwood City Board of Adjustment, which has to do with the building laws -- a sort of board of appeal. I am interested in public matters, but am not "in politics;" occasionally write an article for my favorite newspaper.

CLASS OF 1939

The new Acting Chief, Commander Reichelderfer, became a civilian and was confirmed as Chief of Bureau, effective January 2, 1939. A numerical code for transmission of data was adopted, and identification of cloud forms was brought into line with international practice. Increased emphasis on training and qualifications of professional employees resulted in an expanded in-service training program.

WILLIAM S. BELDEN alone answered our call. Now 80 years old, he was a 41-year man with the Bureau, and now lives in St. Joseph, Mo., where he was last in charge.

I have kept busy reading, listening to radio broadcasts from the Weather Bureau Forecast Center in Kansas City and many well-known radio commentators, round table discussions, etc. . . . A few weeks every summer are spent in the mountains of Colorado. . . . I am an elder in the First Presbyterian Church in St. Joseph, a Rotarian, a Mason, and a member of a small luncheon group that meets at 1 p.m. five days a week. . . . My hobby is flowers, summer and winter, specializing in African violets and amaryllis. . . . Looking after my farm at Horton, Kansas, 50 miles west of St. Joseph, requires frequent trips to that place. It was on this farm that I began taking weather observations in 1888 as a voluntary observer in the Signal Corps of the U. S. Army. The Horton cooperative station now has a continuous weather record covering a period of 60 years, the major portion of which was made by members of the Belden family.

CLASS OF 1940

Recommendations of the President's Committee on Administrative Management led to transfer of the Weather Bureau from the Department of Agriculture to the Department of Commerce. A new observational program was inaugurated, whereby Weather Bureau personnel aboard Coast Guard vessels made regular observations at fixed points on the ocean. In the "big freeze" of January 1940 in Florida, the fruit-frost warning service proved its worth many times over by saving Florida citrus growers millions of dollars in a very few days.

JOSEPH L. CLINE, OIC at Dallas for 27 years, retired with a total of 48 years service. He was at the Galveston station when the disastrous hurricane of 1900 struck, and was highly commended for his service during the catastrophe. Now 79 years old, living in Dallas, he writes briefly of himself:

Since my retirement . . . I have been interested in agriculture, have not had any position with salary, and am not physically able to work -- just resting now.

JAMES H. SPENCER, now 79, entered the Bureau as a printer in 1895, but subsequently became OIC at several stations, the last of which was Buffalo. He writes from his present home in Philadelphia:

I still watch the sunrises and marvel at the beauty of the clouds. I also work in the open daily and do most of the shopping for a family of five adults. My love for "Rhyme and Rhythm" remains about the same as in active W.B. days.

CLASS OF 1941

This 50th anniversary year (as a civilian agency) brought many changes. The Central Office got a new building. Publication of a new and improved daily weather map, showing air masses and fronts was begun. Growing size and complexity resulted in the need for better liaison between the Central Office and field stations. With war coming closer, the Bureau was designated as a defense agency. In November came the announcement of the plan for a limited form of regionalization for field service administration. But hardly had the news reached all stations when the disaster at Pearl Harbor at last brought us into the war. Four of those released for retirement that year have responded to our inquiry.

HAROLD E. BAUGHMAN, who was retired after 13 years service, because of disability, sought out a healthy climate and settled down to enjoy life:

Shortly after my retirement at Fort Smith, Ark., in 1941, I moved to California where all good weathermen go when they die and where some -- good, bad, and indifferent -- go while they are alive. I bought a small acreage in the outskirts of Palo Alto where I am able to practice my hobbies of flower, fruit, and poultry raising with little profit but with a great deal of pleasure. One of the San Francisco papers publishes a copy of the daily weather map and I am able to indulge in the national pastime of second-guessing the forecaster -- with complete irresponsibility.

GEORGE S. BLISS, OIC at Philadelphia for 32 of his 39 years in the Bureau, after doing a little moving about, has finally settled at the age of 79 in Blue Earth, Minn.

My sister had two sons and a daughter in Blue Earth, and I bought a home and moved there to please her. This note is being written at Spirit Lake, Iowa, where I bought a summer cottage to be with one of my daughters and her husband. They will close their Primghar (Iowa) home and spend next winter in Florida and we will close this cottage in September and go back to Blue Earth.

OLIN M. HADLEY, also 79, spent 40 years with the Bureau and is still living in Atlanta, where he was last stationed.

I have been comfortably busy during my period of retirement and time seems to fly with accelerating speed. As a favor to the local (Weather Bureau) office, I make an official record of precipitation and attendant phenomena for my suburban section of the city. My main hobby is gardening and related activities and my interest in these has increased through my association with the Atlanta Men's Garden Club. An interesting diversion is the propagation of plants. . . . I also devote some time to summer budding of pecan trees for neighbors and Club members, and cool-weather grafting of camellia flowering shrubs for their wives, from October to April. Incidentally these outside activities afford an opportunity for pleasant social contacts and help to prevent one from growing old too rapidly.

WILLIAM H. C. HOLST, who was born in Denmark 69 years ago, and spent his career in the Central Office, moved to Florida immediately on retirement.

Our auto and the flowers in our garden keep me busy, and as a hobby I sometimes do some painting. In the last five years I have painted five pictures. We moved to Florida on account of my health which has been fair until the latter part of May this year when I had a stroke which affected my whole left side. I am better now; after 10 weeks in bed I am now able to be up some and am beginning to walk a little.

CLASS OF 1942

War brought many painful readjustments to the Bureau. Weather service to the public, built up slowly through the years, had to be drastically curbed. New demands for service to the war effort piled atop the problem created by large numbers of men leaving for service in the armed forces. For the first time in Bureau history, large numbers of women were trained as observers. For those retiring this year, however, the outlook was brighter because of a liberalized retirement law. We have heard from eight of these men.

WALTER E. BONNETT, now nearly 70, gave 40 of these years to the Bureau, 32 in charge at Fresno, Calif.

It was ill health which brought about my request for retirement and ill health since has precluded any active participation in the strenuous life. Some amateur bookbinding, woodwork at a basement bench, gardening as energies permitted, and much reading which could not be done in the busy years. . . . Most travel is confined to trips within our State, but a 10-week visit to Hawaii afforded Mrs. Bennett and me some special thrills. We had an air view of the Farallone Islands where I had taken her as a bride when assigned. . . for a month's detail to the combined meteorological, storm warning and ship reporting station then operated by the Bureau on the islands.

MERTON L. FULLER served 40 of his 77 years as an active weatherman, 33 as assistant and OIC at Peoria, Ill. Modestly, he says of himself:

There is nothing of general interest that seems worth mention. Merely the "short and simple annals" of modest agriculture -- supervising, expanding, improving operations; appropriate attention to official radio Weather Bureau forecasts and to the horizon-bounded sky; cordial relations with local Weather Bureau office and correspondence with a few former associates. . . . There has of course been sustained interest in the responsibilities of good citizenship and the unobtrusive aiding of worthy public causes.

JOSEPH M. KIRK, OIC at New Haven at time of retirement, 41 years with the Bureau, now 77 years of age, tells us:

After leaving the service I went to live with my son in Berea, Ky. . . . He soon found me a job investigating as to character, loyalty, etc., people in the community who had applied for jobs in activities connected with the World War then in progress. . . . Some time ago I was called to Columbus to live with an aged sister who has been unable to walk for several years. . . . To occupy some of my spare time I took up genealogy. . . . It required a lot of writing and other desk work, but I found it interesting and my numerous relatives whom I contacted seemed to appreciate the copies of the records which I sent them.

ROBERT T. LINDLEY, 76, with the Bureau 41 years, 24 as OIC at Vicksburg, forthrightly declares his stand on national policy:

The undersigned, an inveterate isolationist, spends considerable time (unprofitably) deploring the disappearance of statesmanlike qualities in leaders of public thought in the United States of America since 1916 and speculating as to what sequence of events would have resulted if this country had not been inveigled into two world wars, with dissipation of our natural and financial resources, the growth of militaristic spirit and the theory that the government must support the individual, rather than the citizen must support the government. . . . . He is occasionally visited by dreams that he is late for an observation, or that the station barometer, or other equipment is out of order so that accurate reading cannot be obtained.

WILLIAM A. MITCHELL was OIC at Savannah for 19 of his 44 Bureau years; also OIC at Shreveport, Birmingham, Macon, Helena and Lexington; now 77 years of age. He now lives in Georgia.

Long ago a wise old Roman wrote very interestingly of old age. Among other things he said that old age need not necessarily be irksome, but could even be delightful. With this I agree thus far, speaking for myself only. In early life ambition and the desire for advancement are stimulating and inspiring, but as the years go by ambition gives way to the prospect of peace and rest, and "they who work, not they who play, know that rest is sweet." My retirement has brought me rest and peace and freedom from care and trouble, for all of which I am deeply grateful.

I can sleep without fear of missing an observation or other appointment; I can enjoy the sunshine and the rain without being mindful of their place in the day's forecast; I can feel at ease by the fireside when a blizzard is raging without worrying as to the adequacy of the warning; and I can read of the approach of a hurricane with deep sympathy for my former fellow-workers in their efforts to pacify an excited public, but with infinite satisfaction that I am no longer in the fray.

To try to create a bit of loveliness in a flower garden, to try to fashion some object of beauty or utility in a workshop, to read, to study, are pleasant pastimes, but to pack my grip and go in search of some of the breathtaking beauty spots of this wonderful world in which we live is a pleasure indeed. Such is my retirement.

RALPH C. MIZE was OIC at Tatoosh Island, Baker, Juneau, Cleveland, and Buffalo during his 41 years of service. Now 73, he lives in California.

My principal occupation is cultivating about .7 acre, mostly in fruit trees and vines, including eradication of an old and liberal infestation of poison oak and endeavoring to grow more and better fruit on this and nearby home plots. Local appellation is "the old grafter." Concerned with affairs of the local mutual company which provides water and cares for roads; two years on board of directors and present secretary-treasurer. . . . Minor occupation is rainfall observer. Purely makeshift equipment consists of two-pound coffee can in a crock, with a nursing bottle for a measuring tube.

WILLIAM J. SCHNURBUSCH, now 68, was in charge at Brownsville for 20 of his 32 years of service.

The World War was on when I retired and gasoline rationing soon kept me tied at my home until the close of 1945. During the following two years I toured the entire U. S. and parts of Mexico and Canada until I was stricken by paralysis in August of 1947. Since that stroke I have been almost completely paralyzed in the left side of my body. . . .so that by now I am practically bedfast nearly all the time. . . . I do much reading.

ALFRED H. THIESSEN served with the Bureau from 1898 to 1920, resigned to take a commission in the Army, and then returned to the Bureau in 1941. He was in charge at Mount Weather, Raleigh, Indianapolis, Salt Lake City, Portland, Baltimore, and Denver. Now at the age of 77 he resides in Virginia.

My last job with the Bureau was writing the Weather Glossary, which I continued after my retirement until finished -- if such a job can be called finished. If I had good eyes, after retirement and after the first edition. . . was published, I would have continued with additions and revisions, as I found it a most fascinating study and duty. . . . I have a small shop where I do some cabinet making, mostly after the early American school. I have studied and done some bookbinding, including tooling the leather backs.

CLASS OF 1943

In this year, the 300th anniversary of the invention of the mercurial barometer, the United Nations took the offensive against the Axis powers. Weathermen were needed on battle-fronts everywhere in the world, and key Bureau personnel had to be frozen to their jobs. To insure cooperation of Latin American countries a special program was undertaken by this country. The Weather Bureau conducted a training school in Colombia for Latin American meteorological students and extended scholarships for study in this country to outstanding graduates of the school. Of the weathermen who retired this year, five have written to us.

JOHN H. ARMINGTON, OIC at Indianapolis for 28 years is still in that city; with the Bureau for 41; he is now 76.

Except for three months immediately following my retirement. . . I have been secretary-treasurer of the Lions Club of Indianapolis -- a live wire service club of which I have been a member for more than 25 years, and was one of its early presidents. . . .The business of the position makes it considerably more than a half-time job and affords substantial remuneration as well. . . . But I have sufficient leisure for reading, gardening, and playing.

THOMAS A. BLAIR served with the Bureau for 36 years, 19 as OIC at Lincoln after which he settled in California; he is now 72 years of age.

During my first year in retirement I tried to keep well informed on the advances in meteorology and then began the preparation of the manuscript for the third edition of Weather Elements. I completed work on this edition in the autumn of 1947 and then I relaxed, slowed down physically and mentally, and have not since done any original work. My only hobby is in taking care of my small yard. Of course I do retain my interest in the Weather Bureau and its personnel and in meteorology in general.

LAWRENCE H. DAINGERFIELD at one time or another during his 35 years of service, was in charge at Taylor, Pueblo, Cheyenne, Honolulu, Houston, Los Angeles, and New Orleans. At the age of 76 he now lives in California.

A lifelong interest in archaeology inspired my trip through Mexico in 1943, immediately after retirement, during which period I visited, studied, and took colored pictures (slides) of Toltec pyramids of Sun, Moon, etc.,Mexico City, the ancient Zapotec and Mixtec ruins of Mitla and Monte Alban, near Oaxaca, the great Cholula pyramid near Puebla, and, especially, the outstanding remains of the ancient Mayan cities of Uxmal and Chichen-Itza in Yucatan. I have a fine

collection of kodachrome slides of all these and other Mexican places of interest, including Orizaba and other great mountains, and, fortunately visited Paricutin Volcano, both night and day, when only six weeks old, when at its maximum intensity.

MALCOLM SPRAGUE, now 71, after 38 years as a weatherman man, likewise found California to his liking.

As a climatologist at the California section center I answered so many letters from seekers of the ideal climate that I myself began to aspire for same . . . . To me the climate of the Santa Clara Valley of this State seemed to be the nearest approach to this ideal; so just before retiring, my wife and I bought a small fruit ranch near the center of this valley. We have never had cause to regret our choice of location and have been too busy for travel. . . . This country is still in the boy; so my hobbies are the cultivation of the soil, and the acquirement of additional varities of fruits, shrubs, and flowers. I do find some time for chess. . . . I keep in contact with the San Francisco Weather Bureau Office and serve as weather and crop correspondent for our Campbell location.

FRED H. WECK is still another who found what he wanted in California, for he writes.

Since retiring I have been living most of the time in California. I spent two years in Illinois and came to California to spend the winter in the autumn of 1944 and liked the climate so well I stayed. . . . At the present time I am operating a small printing office and have as a hobby the taking of moving pictures of California flowers and scenes.

CLASS OF 1944

The long-awaited invasion of the continent of Europe, the exact date of which was determined by a weather forecast, again emphasized the importance of the weather in human activities. Later in the year, a hurricane which plowed its way up the whole east coast of the United States resulted in newspaper editorials praising the Weather Bureau's service. To strengthen its service to aviation, Flight Advisory Weather Service units were established at each CAA Air Traffic Control Center in this country. Ten of the 1944 alumni have reported in.

RICHARD W. GRAY, the weatherman who opened the Miami station in 1911, remained with the Bureau 53 years. He is now 75, and looks upon his retirement in the following light:

I have purposely refrained from acquiring any habit-forming hobbies. During my active years I didn't have the time. Since I retired I have not wished to be influenced by hobbies that, sometimes can be quite demanding. After 53 years of rather exacting work . . . I did not wish to ever again have to hesitate to do the thing I wished to do at the moment or refrain from not doing the things I didn't want to do. I find it more satisfactory to devote my time to unplanned activities, and to remain free of all entangling alliances. . . . But it is the blessed boon of reading that makes boredom unknown to me. Instead of becoming bored for the want of something to do, I find that the days are all too short to permit me to do or to read all the literature I should like to read.

WILLIAM H. GREEN; for 32 years OIC at Abilene; served 41 years; now aged 72; living in Abilene. He is brief:

I am doing no traveling, carrying on no correspondence, and have no hobbies worth mentioning.

WILLIS E. HURD, now 74, spent 34 of his 38 years service in the Central Office; his articles on ocean weather have received

wide notice by mariners and climatologists. He is still writing at his home in Virginia.

For a long time I have run my typewriter to the daily tune of 1500 to 2000 words and up, setting down my fancies, studies, doings, and reminiscenes in a very extended diary to which I have given the name of "Journal Intime," otherwise, "Personal Journal.". . . My second hobby merges with the principal one, for I am still, without a doubt, fully weather-struck. The first thing in the morning upon arising I dash for my thermometer and keep watch of it for my minimum temperature. . . . The thermometer is a constant companion during the day, when I am at home, for under no circumstances can I willingly miss its highest reading. . . . My next important hobby is bird-watching. That is, I am making a study of our local birds, and I have a pair of French binoculars with which I help myself in looking for them. . . . Following my retirement . . . I was taken with the flair for translating certain books from the French, romances that had never been published in English text. . . . I was enthralled with that extraordinary hobby, which I carried on through three complete book-length tales, and had gotten as far as the middle of the fourth book when the idea of the Journal overtook me.

JAMES L. KENDALL was OIC at Louisville for 24 years; in the Bureau 34; and is now age 75.

Upon retirement we moved to our little farm about twenty miles south of Indianapolis, where I can indulge in one of my hobbies, gardening and growing small fruits. . . . I have no trouble keeping busy. I do my own carpentering and concrete work. . . . We have traveled rather extensively since the war, visiting both coasts and the Gulf. This is a second hobby. A third is historical research, which I have been unable to indulge because of failing eyesight (cataract). This I hope to have remedied soon.

JOSEPH B. KINCER had just entered the service at San Francisco in 1905 when the disastrous earthquake and fire of that year occurred; later he was to become chief of the Division of Agricultural Meteorology and subsequently the Division of Climate and Crop Weather; he is 75 and has remained in Washington, D. C.

I have enjoyed occasional meetings and correspondence with Weather Bureau people, considerable travel, gardening and lodge work. There is always plenty to do around the house as indicated by the disgusted explanation of one, busy at work, who yelled to his wife, "Who did all this work before I retired?"

ERIC R. MILLER, 71, headed the Madison station for 36 of his 43 years of service. Now in California, he says:

At present I keep busy at planting and watering. We traveled to Florida and the mountains of North Carolina and across the South and Southwest while sampling climates, but have remained fixed here for the past three years. . . . My hobbies are shop work and reading. . . . In La Jolla I attend weekly seminars of researchers and students at the Scripps Institute of Oceanography.

GEORGE M. RICHARDS; age 65; with the Bureau 38 years; was chief of the Station and Accounts Division, and later the Fiscal Section. He too still lives in the District of Columbia.

The so-called "life of Riley" since my retirement has been, on the whole, eminently satisfactory to me. I have played golf with such constancy that I have at last acquired sufficient skill to lose gracefully and to devise new alibis never before heard of by the proletariat. I have also acquired the best physical health of many years. . . . My off-links time has been largely devoted to the collection and study of books on several scientific subjects which have always deeply interested me -- this, I hope, with some intellectual benefit. . . . Still, I must

confess, there have been moments when I have had hankerings to enjoy again the clash, clamor, and confusion of the dear old office.

ORLIN R. ROGERS; age 68; served 34 years, the last 17 of which he was OIC at Columbia. He is still near that city, on an 80-acre farm.

You will find that we retired has-beens cherish our leisure, and wives and children, and all the other influences that operated in times past to keep us continuously and gainfully employed cannot prevail against us. We distinctly do not keep busy. We cultivate leisure. We are earnest students in the practise of gracious, cultured living. We find that these last years are the best ones given to man here on earth. . . . To you unfortunates who perforce must toil on yet for a time, we will, if you properly urge and insist, suggest provisions for the happy retirement that should be started many years before. It is pitiful to see a fish suddenly pulled from water to gasp its life away on the sand. Men who have no interest other than their job and have that rug jerked from under their feet likewise are to be pitied. They have nothing to live for, and soon wither away.

TRUMAN G. SHIPMAN; age 67; a 40-year man; OIC at Fort Smith and Davenport. Although now living in Pennsylvania, he likes to move around.

Since an opportunity to travel was a moving factor in my voluntary retirement, I have taken advantage of it so far as my resources and health permit. I have visited Mexico, Guatemala, Cuba, Hawaii, and Canada in the last four years and spent two winters in Florida and two in Arizona. Travel is my principal hobby, and meeting new people and reading about what interests them in their newspapers affords me pleasure.

RALPH W. THOMAS; age 69; all of his 36 years service was at Erie (except for one year), and he was OIC the last 14; he still lives there.

I have a vegetable and flower garden which I enjoy working, especially the part with flowers, My hobby is traveling by auto to scenic localities where there are mountains and lakes. . . . Ever since I was a child I took great interest in weather changes, and could see how important they were in our daily lives Even to this day my daughter-in-law who lives next door to me, will say when she is about to do the family wash, "Dad, is it going to rain today?" and of course I consult my aneroid barometer and give her my forecast, and then she acts accordingly.

CLASS OF 1945

War's end brought planning for peacetime weather service. For Federal employees in general the year brought a pay raise; for Weather Bureau people in particular it brought a long overdue reclassification of field positions. We have had letters from the following alumni of 1945.

DR. CHARLES C. CLARK was assistant Chief of Bureau for many years. Of his 74 years, 49 was spent in Government service, 32 with the Weather Bureau. He continues to be active in his law practice and some horticultural work in Chevy Chase, Md. He comments:

When I came to the Weather Bureau some 35 years ago, after nearly 20 years of Government service throughout the United States and in Europe, I noted -- that compared with other Government agencies -- the distinctive and outstanding characteristics of the Weather Bureau's fine trained personnel

group was pride of association with its important service to the public, fidelity to duty and loyalty to the Bureau, and its prestige -- which they were always quick to defend. The "old timers" certainly practiced what we preached. . . . Through the years, since the old U. S. A. Signal Service days and the inception and organization of the present Weather Bureau nearly 60 years ago, these characteristics have been inculcated in the personnel body and strengthened the Bureau's services -- in the estimation and appreciation of the public.

JOHN DAILY was in charge at Providence when he retired after 34 years service. Now 65, he writes:

Soon after retirement my wife and I moved to Henderson, N. C., where the year-round climate is mostly delightful, except there is a slight excess of rainfall in summers for gardeners. . . . We bought an acre of land and a house that needed remodeling, so we have managed to keep decidedly busy, with mowing the half-acre lawn, weeding the garden and caring for the shrubbery, fruit, and flowers, which seems to leave little or no time for other activities.

EDGAR C. HORTON still lives in Birmingham, Ala., where he was OIC for 35 of his 41 years of service. He is 74 years of age.

I have devoted considerable time to gardening since retiring. I have done considerable translating of commercial and technical papers from French and Spanish for business, industrial, and shipbuilding corporations, the medical college, and individuals, and some matter mostly personal from German, Italian, and Portuguese. These things and rather extensive reading keep me occupied. . . . If I have a hobby it is anthropological studies. I am president of the Birmingham Anthropological Society.

HARRIS A. JONES, another 40-year man, was in charge at Elkins for 25 years. He continues to live there, and at the age of 72 is busy with an unusual hobby:

I have no family; was never married. Therefore I have had to try to help other people's kids rather than my own. . . . I am an enthusiastic Shriner. This has given me access to the work of the Shriners for crippled children. I have worked with crippled children for more than 25 years, and have been instrumental in the free hospitalization of more than 250 children. . . . I have for many years been an enthusiastic Rotarian (motto: Service Above Self). This has coordinated nicely with my work with crippled children. . . . I am a past president of the Elkins Rotary Club, and have often represented my club in the District, State, and National gatherings of Rotarians. I am on the Board of Directors of the West Virginia Society for Crippled Children and Adults.

JAMES M. JONES, 70, who served the Bureau for 47 years, 30 of which were as OIC at Eureka, Calif., (where he now lives) has also found an opportunity to assist in illness.

Soon after my retirement became effective my wife's health failed and within the following two-year period she had to undergo four surgical operations. Between periods in hospitals, and since the latest one, it has been necessary for me to devote practically all my time to her care. How fortunate it was for us that my retirement left me free to do this. . . . I do occasionally find time to make a brief visit to the local office of the Weather Bureau, just to keep in touch with the latest developments and procedures.

G. HAROLD NOYES also gave the Bureau 47 years service, during which time he was in charge at La Salle, Lexington, Trenton, Cleveland, and Boston. Still sprightly at 74 and still in Massachusetts, he reports:

During my retirement my wife and I have been both enjoying our home and excellent health. We have been visiting our children and grandchildren and travelling from Maine to Wisconsin and intermediate regions. I have had oc-

casional correspondence with other Weather Bureau men and have noticed weather reports and official broadcasts in many localities and have maintained contact with "Department of Commerce Associates."

WILLIAM F. REED, now 74, served the Bureau from 1891 to 1918 and then again from 1940 to 1945. He keeps busy at his home in Tennessee as follows:

Read the headlines in the morning newspapers and study the wirephoto wirephoto weather map. . . . Feed and water the poultry, make yard furniture and repair furniture on the farm. Cut the grass. . . . Maintenance man for an 10-unit apartment house and several residence places. . . . In slack periods I sit down at the piano on the farm and invent a new song, lyric and music, and scribe it on sheet music paper. . . . I have an anemometer and anemoscope mounted on the garage without electrical connections. I have a raingage and make daily measurements to record in a monthly form for the Weather Bureau and TVA. I report by phone measurements of one inch or over for their flood calculations.

CLARENCE J. ROOT, 74, was in the Bureau 45 years, 21 as OIC at Springfield, Ill., and 13 at Detroit, near where he now lives.

Have sold six meteorological articles to Science Service. Non-meteorological articles have been published in the magazine Marine News and in newspapers in Detroit, Chicago, and Joliet. An illustrated article, "Chicago's Passenger Ships," is to be published in the magazine Inland Seas and Marine News. . . . Lifelong interest in railroads (especially locomotives), and Great Lakes passenger ships. Have collected photographs of locomotives for 66 years (many historical locomotives and trains). Also, collect U. S. and Canadian postage stamps, and photographs of Great Lakes passenger ships.

MISS AGNES RUTH THOMPSON, who retired from the Central Office because of her health, now lives in Virginia.

I moved to this nice town of Berryville with friends whose friendship was handed down to us by our parents. We have everything the same as the city except the noise and confusion. Only six miles from the beautiful Blue Ridge Mountains and a town of community spirit and love of entertaining. . . . My hobbies are flowers and my small stamp collection my father started me as a child when I was ill at one time.

MISS ROSE M. VICKERS spent 36 years in library work in the Government, 9 of these in the Weather Bureau, and has continued doing this work in Washington in retirement.

My occupations since I retired are as follows: 1945-47, cataloger in the American University Library; 1948-49, volunteer worker for the Republican National Committee; research worker on call, and library assistant on call. . . . The project which the Weather Bureau set up in the Library of Congress made me familar with its resources and this knowledge has helped me since.

EDWARD L. WELLS was OIC at Portland, Oreg., for 28 of his 49 years of service, but has moved since then to California. Now 74, believes retirement should be relaxing:

The question, "How do you keep busy?" . . . has been asked by many of my friends, in one form or another, since my retirement. This seems to imply that one should feel under compulsion to keep busy. . . . Be that as it may, one of the delightful things about my retirement has been the freedom from such compulsion. . . . I began work in the fields in harvest time at the age of 8, then in a grocery store at the age of 16. I entered the Weather Bureau at the age of 20, and for

almost 50 years carried such responsibilities as were placed upon me. Many times these responsibilities were heavy and the hours long. The years were happy years, and I am deeply grateful for them, but when the time for compulsory retirement came I welcomed it. . . . To lie in bed till seven o'clock in the morning, and then partake of a leisurely breakfast without an eye on the clock, and then to choose my own tasks and make my own schedule for one day, have been a constant delight.

CLASS OF 1946

A major undertaking of this year was the "Hypo" Project by which the Bureau assisted the Army Air Forces in its transport operations in Europe as well as in the Pacific. Congress authorized a network of observation stations in the Arctic. Special study of thunderstorms was undertaken in Florida, where with assistance from the armed services a program of highly detailed observations was begun. More attention was being paid to the administrative structure of the Central Office and Regional Offices than ever before. Seven weathermen of that year's group have told us something of themselves.

CHARLES N. BEMIS, age 63, is now in Vermont following his retirement after 31 years in the Bureau:

My second move after leaving the service brought me back to a small village in my boyhood town. . . . There is no particular schedule to follow, no penalty for oversleeping or being late, and little reason for wishing ourselves elsewhere. . . . The care of a cow, her offspring, chickens, and a large garden, is a good start toward a day's work. The many visits from friends and relatives, and the inevitable call for community and neighborly services contribute to making life busy and interesting. In short, I am back home in the country -- and only in the country have I ever been content.

WILLIAM S. BROTZMAN was OIC at Pittsburgh for the last 24 of his 40 years service. (His son, L. E. Brotzman, is chief of the Plans and Program Management Office.) At the age of 73, he is an active farmer in Pennsylvania.

Since I left the Weather Bureau . . . I have been working much harder than I had planned to, but I do not feel any ill effects from it so far, and I am much more content, observing, and enjoying the results of my labor than I would have been if I had remained at my home in the city with nothing to do. . . . I am located on a 45-acre farm adjoining the Borough of Worthington, Pa., about 40 miles north of Pittsburgh. . . . Both the house and barn were in need of repairs when we came here, and we did considerable remodeling in the house. The work still requires considerable of my time. . . . The chores in connection with the stock require an hour of time morning and evening. The remaining time is spent gardening and work in connection with remodeling the house, and repairs to the rest of the buildings. . . . Briefly, I am farming, gardening, building, and doing some real estate work which keeps me busy, but also considerably augments my retirement pay.

LAWRENCE C. FISHER gave 44 of his 73 years to the Bureau; for many years he was OIC at Seattle which he believes to be "the most beautiful city in the United States"; and where he still lives.

In a world, a country, a state, and a city, where so many events of vital importance are occurring, it is easy to keep interested. Nor is it difficult to

keep busy after one has passed three score and ten years. I note it takes less to keep a person occupied, and the flight of time is like that of a supersonic plane -- it has passed by before one hears its swoosh. . . . The reading of a number of books, either treating of, or making reference to events that have occurred in this region, especially in or near Seattle, and the searching of many issues of newspapers, have proved a source of notes on weather antedating official records. . . . I have written a little on weather and climate for local publication. Such notes and writings are being made available to the Seattle offices of the Bureau. . . . Membership has been maintained in the Seattle Chamber of Commerce as in the past, with allocation to the State Development Division; also in a unique and interesting service club of business and professional men of 100 members, whose chief aim is to promote all projects of the YMCA, and especially those for boys.

JOSEPH P. MCAULIFFE, while only 65 now, spent 36 years in the service, 24 as OIC at Corpus Christi. From that city he writes:

My wife and I have been spending the winters in Jacksonville and Miami, Florida. . . . One of my hobbies is writing verse and short stories and articles. I am currently publishing articles about my experiences with the old timers here while I was in charge of the local office. These articles are appearing in the local paper. I have also dabbled in real estate, bought and sold several houses, the last one I believe I'll keep, as I enjoy the breezes that sweep over these coastal plains in summer.

LEON F. PALADEE prefers California for living now that he is retired; he spent 20 years with the Bureau as a printer and is now 59.

In both Texas and here I have kept busy at odd jobs and fishing for recreation. . . . Did two or three days printing here in Los Angeles but not being a member of the union and too old to join, I was unable to continue at my trade.

HORACE L. PUGH, with the Bureau for 35 of his 65 years, and now living in Jackson, Miss., has developed his own philosophy of retirement:

I have discovered that a great many people fear retirement. Many have asked me, "What do you do with yourself?" . . . . My stock reply is, "The first thing I did was to throw away the alarm clock." . . . To me, retirement is a problem of finding your natural habitat, and working at something that you enjoy doing and that you do well. . . . I travel some and so some reading, but most of all I like carpenter work. . . . Every day of my three years of retirement has been enjoyable.

THADDEUS S. STONE was another printer, being for several years head of the Printing Section. He was with the Bureau 46 years, and now at the age of 66 lives in Florida, and likes it.

One of our reasons for our locating in Miami, Florida, is the wonderful year-round climate. Sure it gets hot during the day but there is generally a breeze blowing and the nights are cool. . . . As a rule there are so many things going on at the same time we have difficulty in deciding where to go. . . . We attend conventions, concerts, flower shows, parades, and sport events of all kinds. . . . Motoring in and around Miami is worth while and we take short trips. . . . Ours is a happy, carefree, active life, and we love every minute of it.

CLASS OF 1947

Research activity in the Bureau got a boost and Dr. Ross Gunn, a nationally famous scientist was brought in to organize a Division of Physical Research. The age-old dream of "making rain"

received much public notice and was given serious investigation. For the first time in history, the International Meteorological Organization held a conference outside of Europe, this time in Washington, D. C. The Bureau undertook to assist the war-ravaged Philippine weather service get back on its feet. Bureau-wide program for placing observational data on punched-cards was instituted. Of the 1947 class we have received replies from seven weathermen.

HOWARD B. COWDRICK returned to Ohio after his 39 service years, the last as OIC at Marquette, Mich. At 65, he is a farmer and enjoys it. (Two sons, one at Muskegon and one at Joliet, carry on the Cowdrick tradition in the Bureau.)

Immediately after I retired I left my home in Marquette. . . and came back to northwestern Ohio, where . . . I was born and grew to manhood. . . . If I may inject a bit of advice to those about to retire: tear yourselves away from the scene of your activity and get busy at something as different as possible. I found that this took away the "lost" feeling which I would have had if I had re-remained in Marquette. . . .My brother and I had inherited the ancestral small farm situated on the high bank of the Maumee River, just outside the corporate limits of Napoleon. . . . We now have a comfortable 8-room house, with the peace of the country but with all city conveniences, water, telephone, and daily mail delivery. . . . We are making friends and fitting into the life here.

WARREN B. ENT retired because of his health after 17 years of Government service; he is 59.

I have been visiting around with my friends and in other time have worked a little in order to drive away the blues, as sitting around all the time sure does get on a person's nerves.

OWEN T. LAY, now 69, was OIC at Chicago for many of his 38 years with the Bureau. He and Mrs. Lay are now living in North Carolina.

In 1947 I completed several articles on weather, climate, and related subjects that had been requested by former President Walter Dill Scott of Northwestern University, and I understand that some of them have been included in the new American People's Encyclopedia. . . . Early in this year I was invited to be the special guest of the Chicago U. Department of Agriculture C lub to receive a certificate of honorary membership in that organization. . . . Recently I was made one of the 3-member Board of Governors of Rosscraggon Wood, a corporation founded many years ago to establish on a tract of land it owns a sanctuary for the protection and preservation of the native wild flowers and bird life of the vicinity and to promote interest in the natural history of the southern Appalachian region. . . . We have never been busier, nor happier, than during the last two years.

LOREN P. LEECH retired of failing eyesight after 10 years with the Bureau. Now 40, he has gone into private business.

Since retirement I have been the owner and operator of a suburban hardware store in Seattle, where I keep more than busy among my nuts, bolts, and nails. My defective eyesight does not handicap me too much in the retail business; my customers read labels and price lists for me and my wife handles the mail and the books and altogether we form a pretty smooth working organization.

C. E. NORQUEST in his 43 years with the Bureau was OIC at Boise, Houston, and San Francisco, and now at the age of 72 is

living in California. (His son, Kenneth Norquest, is supervising forecaster at Washington National Airport.)

My wife and I devoted much of the first year out of the office to travel. . . . We have a new home here and much of my time since moving in on November 20, last, has been devoted to getting the place in shape with lawns and garden. Growing roses and glads as well as carrots and squashes. Find little spare time so far. Thought I would get a lot of reading done, but so far I haven't gotten around to it. Used to work an 8-hour day for the Weather Bureau, in latter years; working for myself and wife, I put in 10, 12, sometimes 13 hours a day, including Saturdays.

ABE WIESNER, now also 72, served for 42 years, 16 as OIC at Alpena, Mich. He is now living in Ohio.

Gardening was always one of my hobbies, and that is now my principal occupation. I have a small orchard, also two small gardens. . . . They give me all the work I can stand, working with hand tools. It is a great pleasure to see crops grow and mature, and they taste so much better than food from the store. I can now see considerable logic in the statement of the retired Roman Emperor Diocletian when he told a friend, "Were you to come to Salona and see the vegetables I raise with my own hands, you would no longer talk to me of empires." . . . I might add for the benefit of those who are about to retire that the change is not as serious as it may appear at first. The hardest part is the "let down" feeling of being no longer of any use. However, with a certain amount of determination and a proper mental attitude a person will adjust himself to the changed condition in a short time, if he tries to do something useful and interesting. My suggestion is, "Make up your mind beforehand what to do, and get busy immediately."

ROBERT M. WILLIAMSON was with the Bureau for 44 years and OIC for many of them at Nashville and Indianapolis. He is 69 now and has returned to his native State:

I returned to Nashville, Tenn., for retirement. Here we had spent 28 happy years before going to Indiana and here we had raised and schooled our three children. Tennessee also was the native State of both my wife and myself. The summer of 1947 was devoted to finding and purchasing a permanent home place. This had to include a good plot of workable ground, for flower and vegetable gardening I knew would be my main hobby. . . . As a secondary pastime we keep a flock of chickens, but never so large or so valuable that we cannot dispose of it on short notice when a trip is considered.

CLASS OF 1948

With television attaining wide popular use, the Bureau launched an experimental series of telecasts on which the weather map and forecasts were presented directly to the public. Fruit from the seeds planted by the inauguration of the Employee Suggestion Program the year before began to ripen with the adoption of numerous ideas submitted by employees. The "Hypo" Program started two years before was brought to an end.

FRED H. ACKELOW, who served for 45 years at Indianapolis, writes:

Since leaving the service I have kept quite busy at various chores and spending part time at work, where the surroundings, the work and machinery were interesting to me. At intervals I found much pleasure reading and during the past seven weeks have taken automobile trips to Wisconsin, Illinois, and Kentucky, where I did some fishing.

JOHN C. ADAMS, a native Texan who was a printer for 31 years (and whose son Gayle Adams is OIC at San Angelo), can now at the age of 71 indulge in a hobby close to his heart. With his horse, "Commanche Chief," in a trailer he is visiting every county in Texas with the avowed purpose of riding on every ranch in the State to gain members for "Spirit of Texas Clubs." The aim of these clubs is to "revive pioneer hospitality, bring about a better feeling among the citizenship, improve our relations by being more friendly and neighborly, and promote all matters pertaining to the betterment of the State financially, morally, and socially." The idea came to him as follows:

When I retired I hoped to have a great time being free to do anything I wanted to, but after I had participated in all the amusements of the younger days I found myself wanting to be back with the "gang". I had spent many happy days with in the Weather service. This desire became stronger and having been very active all my life I could not be contented to be idle. Retirement is not what it is "cracked up to be," and to quiet my nerves I started the hobby mentioned in order to meet and enjoy the association of my old "cronies" on the range.

WILLIAM A. CHAMBERS, JR., whose 29 years of Bureau service were spent at New York, has moved southward and now lives in Bains, La. We hope to hear more from him next time.

HARRY C. DEMENT, whose entire 43 years with the Bureau was at Parkersburg, W. Va., now finds himself at 72 contented to remain there:

A small garden, mowing the grass, keeping my home, a two-storey six-room, in repair. Last September I put a new roof on by myself. This spring I painted the house outside and inside. . . . Like to travel. . . . Am somewhat of a bookworm; also like to visit the library and read the metropolitan newspapers and magazines. Enjoy outdoor activities and manage to see baseball and football games.

ROBERT M. DOLE, 65, many of whose 36 years of service were served in Maine finds that State a spot to keep himself active with several occupations.

Since separation from the service this former meteorologist has been making fast-lens cameras for photographing meteors, and three have been completed for use. We keep up our research in meteor showers, and have been able to duck both bad weather and the moon. A little research into color photography is exciting. What we enjoy most is our own private weather service for the fishermen and farmers. Since we took over we have not had one loss in boats and lobster pots.

ERNEST E. EKLUND, at one time assistant regional director at Seattle, was principal assistant at San Francisco when he retired after 33 years service to live in Napa, Calif.

My time is spent in the garden or in my work shop where I have lots of tools including an electric drill which my former associates presented to me when I retired, and which I find very useful in my tinkering. Occasionally I take a little time to go fishing. . . . All in all I never lack for something to do, so I am quite happy.

EUGENE D. EMIGH, whose retirement December 31 culminated more than 50 years of Bureau service, is still living in Montgomery, Ala., where he was OIC for 23 years. He has not as

yet made plans for future activity, but reports that "a number of organizations are laying for me and hoping to put me to work (for free)."

FOY N. HIBBARD, OIC at Sandusky for many of his 33 Bureau years, has moved to Virginia, and occupies himself at a long-time hobby. He reports his progress:

The small 8-inch telescope is mounted temporarily and the 12½ inch glass will go up later. . . . I suppose my avocation for nearly 50 years has been the experimenting with optics and I never tire of handling or testing fine lenses, either microscope or telescope. . . . And it is a pleasure likewise to handle a transit, level, or labratory equipment.

JAMES H. JARBOE was a weatherman with the Panama Canal for 6 years before joining the Weather Bureau; for 25 of his 32 years with the Bureau he was in charge at San Antonio. Now he is "pleasantly situated on a half-acre in Albuquerque."

Since leaving the Bureau I spend my time growing things, and find it a most interesting and worthwhile hobby. . . . I have learned to love the musical drone of a power mower, the whine of electric trimmers, and the deep-throated roar of a weed burner. In other words, I am a big farmer in a small way. . . . To those approaching retirement, may I suggest that some plans be made in advance. The date comes up suddenly and one needs a definite plan to go from a life that has been busy and interesting. It can be a wonderful period, and it certainly has proven so for me.

HARLEY N. JOHNSON, age 72, was an active weatherman for 41½ years, 34 as OIC at Rapid City, where he still resides.

Upon my retirement I found the most difficult phase to overcome was the thought that I should go to the office each morning, then to remember that I no longer had an office. . . . My activities in weather work, since my retirement, have been of no consequence. However, my folk, whom I have known for years, still insist I should know all about current weather, crops, and stock conditions. . . . In season I spend some time in trout fishing, pheasant hunting, and rose gardening.

FRANK A. MATH served 46 years, was OIC at Havre for 22.

After retiring . . . I purchased a home -- not a new one -- in a good location in Havre, Mont. I am busy fixing it up. I am a weather observer, not a carpenter. However, I am discovering resources within myself. One job leads to another. I made several flagged walks using Beaver Creek stones and cement. There were many carpentry jobs to do. Now, I am wielding the paint brush. . . . . I can now saunter around town visiting with friends and take it leisurely. The release from responsibility is wonderful. . . . I find my days crowded with little jobs; lots of fun; so many things I had hoped to do; and now with regained health realize I can do them. Retirement -- it's great.

BENJAMIN PARRY retired on the last day of 1948 with the thanks and good will of the people of New York City where he had been in charge of the city office for the previous five years. He was with the Bureau for 35 years. He continues to live in Lyndhurst, N. J.

When I announced my intention to retire . . . a close friend offered the following, "Go to it; put the same interest in your retirement that you, evidently, did in holding your job, and you will never be bored in your retirement." . . .This advice I considered sound and immediately planned how to use my leisure time: First, to provide a carry-over activity; second, see some of my country; and third,

arrange time to play at my hobbies. . . . The carry-over activity was easily accomplished by publicity received in connection with my retirement when I announced my intention to serve as consultant in meteorological problems. There was an immediate response from the legal fraternity, and I have appeared in courts in connection with cases of litigation requiring opinions and interpretations of meteorological problems. I have on file several projects which will come to trial during the fall court term. . . . I have found a lot of time to construct toys for my grandchildren, and trips to the West and Northwest provide a lot of scenic material to practice amateur photography. Being absent from home prevented me from riding my most interesting hobby, fox hunting, but during the coming fall and winter months my hounds are scheduled for full-time fox-hunting.

CLASS OF 1949

In January the Midwest experienced what was in some ways the worst blizzard in history, recalling the famous Blizzard of '88. Awards for meritorious service were presented 14 employees, and for various lengths of service to many more. With economy once more of great importance in Bureau calculations a consolidation of regional offices began to take place. We wrote to those men who "graduated" during the first half of the year, but of these we have received five replies.

FRANK T. COLE, now living in Mobile, Ala., where he was OIC for 16 years, says:

I have read considerably, fished a little, corresponded with a few friends in the Weather Bureau, and made a few short trips in Alabama and Florida. I find plenty to do around the house making minor repairs, painting, and cutting the grass. . . . I find I sleep better because I have quit worrying about the wind and the rain.

ROBERT R. DAVIS, who retired after 22 years at Amarillo because of his health, tells us, he continues to make his home there and:

My hobbies are hunting and fishing and I am working hard to get my health back to a point where I can enjoy them again. I have a state license to raise game fowl and I hope to supplement my retirement in this manner.

S. D. FLORA, OIC at Topeka for 32 years, is just as busy at his home in Topeka as he ever was while with the Bureau:

The world to me is a very interesting place and if I live to be 100 I will not get done all I wish to do. . . . Have had the home workshop for years and have recently fitted up a den in a spare room at home that has all the facilities of a Weather Bureau office for writing and study but is minus such distracting things as a telephone and a teletype. It has an electric clock, which I can disregard if I choose, and a crystal ball which seems to fill the need for the former flood of instructions. A new book on tornadoes is on my agenda and possibly a series of daily broadcasts, just to keep my hand in.

B. R. LASKOWSKI, for 15 years OIC at Huron, retired to recover his health and is living in Delta, Colo.

As yet I have not fully recovered my health, but am feeling much better, and rest and the Colorado sunshine are helping. Have been unable to do any traveling or take any long trips, but am in hopes. . . .by another year to be in a position to do so.

ELLWOOD E. UNGER, OIC at Louisville for 15 years has found retirement hard work too:

About a year ago I purchased a small 14-acre farm located about 15 miles east of Evansville with the expectation of living on it after retirement. . . . We moved to the farm. . . just two days after I retired. I should say it was never my purpose to take it easy after my retiring, and I can truthfully say that so far I have put in five very strenuous months. . . . I am getting a "big kick" out of the work I am doing.

PURCHASE OF ADDITIONAL ANNUITY

A station official who recently retired took advantage of the provision in the Retirement Act which permits of the purchase of additional annuity through voluntary contributions to the retirement fund. He considered the benefit derived therefrom by him to be "almost unbelievably good" and suggested that this feature of the Act be again called to the attention of all Weather Bureau employees.

An article on this subject appears on pages 62 and 63 of TOPICS for June 1942. Since then the Act has been further amended, and further information may be found on page 263 of May 1948 TOPICS. While most of the provisions contained in the 1942 article have been retained, the amended Act simplifies the method of computing just how much more annuity is being purchased with the extra contributions. Instead of the factors tabulated on page 63 (June 1942) the additional amount purchased with each $100 deposited in the fund is $7 for one retiring at the age of 55, and is increased by 20 cents for each year of advance in age at time of retirement until it reaches $10 at age 70 years.

Whether or not one wishes to avail himself of the additional annuity that may be purchased under this provision is, of course, for individual determination as to whether one desires to retain personal control of his capital for other purposes, or so that it may be distributed through his estate, as the amount of additional contribution is used up each year of retirement by the amount of annuity purchased thereby. For example, this voluntary contribution fund would be exhausted at the end of 10 years in the case of an employee retiring at age 70. That is, there would be no residue available for a designated beneficiary.

On the other hand one is now given the option of taking a reduced annuity and provide for a survivorship annuity for his widow somewhat similar to that provision available under the regular retirement annuity. The difference between the two is that the widow would receive under the purchase plan 50% of the reduced annuity, whereas under the regular provision she would receive 50% of the full life annuity as computed before reduction.

Additional information on the Retirement Act of 1948 may be found in the April, May, June, and July 1948 issues of TOPICS.

COVERT RETIRES AT 70

Roy N. Covert, who reached the compulsory retirement age of 70 in August, retired August 31 from his position in the Division of Station Facilities and Meteorological Observations. He had been with the Bureau for 46 years, having joined as an observer at Chicago in 1903. Six years later he was transferred to the Central Office for duty with the Instrument Division. He has been continuously assigned to the Central Office since then. While in the Instrument Division, Mr. Covert was concerned extensively with the design and installation of storm warning equipment. He also authored several circulars on instrumental wiring, installation and maintenance. At one time he was assistant chief of the division. In 1941 he was relieved of this work for a special assignment of bringing all Bureau administrative regulations up to date. More recently he has been concerned with the station history project. His address is now 2710 Belleview Avenue, Cheverly, Md.

FIRST REGULAR DIRECT BROADCAST?

Radio Station WQAM, Miami, recently asked for the assistance of the Weather Bureau in connection with plans to commemorate the 20th anniversary of direct broadcasting over the facilities of that station from WBO Miami. Available records indicate that the broadcasts over WQAM, which began on a regular basis November 1, 1929, were the first regular voice broadcasts over a commercial radio station direct from a Weather Bureau office. Emergency broadcasts, during the hurricane season only, were carried over the facilities of WQAM beginning in June 1926. Voice broadcasts in Washington over Station NAA began in February 1923 but this was a Government-owned station. Broadcasts over KDKA and WCAE in Pittsburgh began in January 1926, but these were studio broadcasts and not direct from the Weather Bureau.

We would like to establish whether or not the WQAM broadcast was the earliest regular program of the kind and any information that can be furnished by field offices in this connection will be appreciated.

CORPUS CHRISTI ASSISTANT RETIRES

Bryan Braley, principal assistant at WBO Corpus Christi, retired August 30 because of disability. He has been with the Bureau for 17 years, joining it in 1931 as a junior observer at Del Rio, Tex., but resigning in 1935 for about a year. On his return to the Bureau he was again assigned to Del Rio, later being transferred to Las Vegas, Oklahoma City, and then to Corpus Christi. A veteran of World War I, he has suffered poor health since then as the result of a service-connected disability. Mr. Braley resides at 702 Southern Street, Corpus Christi, Tex.

GEOGRAPHIC LIMITS OF FORECASTS

A study by the Broadcast Training Unit indicates that early morning radio listeners frequently fail to note the radio station to which they are listening. Unknown to them, they may then receive weather forecasts for distant areas rather than local. Broadcasting magazine tells us of a rural listener in Illinois who had his set tuned to a New Orleans station when he went to bed one night this summer. In the morning his wife snapped on the radio and, since a good program was on, no one noticed the station setting. When the weather forecast came on, it called for rain -- for Southern Louisiana, although the announcer did not clearly indicate this. The Illinois farmer thought it a local forecast and changed his plans for putting up hay that day. When the local weather turned out "fair and warmer" (as forecast), "Boy, was the old man mad!"

As the result of this study, commercial broadcasters throughout the country have been asked to be more careful to identify the geographic area for which each forecast is made. Weather Bureau Offices will probably receive numerous requests from radio stations for definition of forecast areas and geographic limits of regularly released forecasts. Broadcasters should be encouraged to present the verbatim official forecast with adequate geographic definition.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

WEATHER BUREAU

TOPICS

VOL. VIII OCTOBER 1949 NO. 46

IN THIS ISSUE

OCEAN WEATHER DUTY

The weather patrols now maintained in both the Atlantic and Pacific Oceans in cooperation with the U. S. Coast Guard have for nine years been a mainstay of over-ocean forecasting. Duty with these patrols has also proved an interesting assignment for weathermen with a taste for sea life.

Officials in charge of patrols are SP-8; all others SP-6, Promotion to SP-8 depends on vacancies occurring through normal turnover or expansion of the program. SP-6 ship observers who qualify in charge are promoted to SP-8 as vacancies occur. A total of five Weather Bureau men, including the official in charge, is normally assigned to a vessel.

The period of assignment is at least one year, but preferably two or more years.

Transfer of ship observers to land stations, depending upon available vacancies, is usually to the SP-6 grade. Positions in the higher subprofessional grades are limited and therefore transfers to SP-7 and SP-8 positions are infrequent. When demotion upon transfer to a land station is unavoidable, the salary is usually maintained as near as possible to that received while on ship duty.

Inexperienced employees usually require a short period of training at a land raob station prior to ship duty. This is a function of the Regional Office to which the employee is assigned.

Ocean station vessels remain "on station" for 21 days; the time enroute to station is from 3 to 8 days each way, depending on the location of the station and base from which vessel operates. Approximately 60 to 70 percent of the total time is spent at sea.

A per diem of $2.40 for subsistence is allowed while aboard ship. This amount is adequate to pay the cost of meals, laundry and other incidentals. No deduction is made from the per diem for lodging provided aboard ship. Weather Bureau observers assigned to ocean station vessels are considered temporary members of the wardroom mess; they are allowed the same night rations as the wardroom officers and pay their pro-rata share of the cost of the mess for the period during which they are subsisted.

A work week of 63 hours per man is authorized aboard ship. This includes a basic work week of 40 hours and 23 hours overtime, for which payment is made at the authorized scale.

Ship observers are assigned routine Weather Bureau work by their supervisor during in-port periods of duty.

Ship observers are based at Boston, New York, Norfolk, and San Francisco. When assigned to vessels leaving from other ports, e.g., Portland, Maine; Wilmington, North Carolina; Seattle, Washington; or Long Beach, California, the observers are authorized to travel to those ports from their home station and return to their home station upon debarkation.

JACKSONVILLE CHANGES OIC'S

When Walter J. Bennett retired September 30 after more than 49 years with the Bureau, during the last 17 of which he was OIC at WBO Jacksonville, Fla., he could be sure his successor was familiar with the station. Roland L. Anderson, former assistant regional director of Region II, who has taken Mr. Bennett's place, began his career as a weatherman at Jacksonville, spent some 14 years there and was in charge of the airport station from 1930 to 1937.

Mr. Bennett, who reached the compulsory retirement age of 70 during September, joined the Bureau in 1900 as an observer at San Francisco. A transfer in 1901 took him first to Louisville, Ky., and then a few months later to the Central Office. Following 4 years in Washington (during which he acquired a B.S. degree from The George Washington University) he was in charge at Charlotte, N. C., from 1905 to 1909. His next transfer was as OIC at Canton, N. Y. In 1913 he was made OIC at Tampa, Fla., and remained there until 1932 when his assignment as OIC at Jacksonville began. From now on correspondence will reach him at 2130 Riverside Avenue, Jacksonville 4, Fla.

The new OIC, Mr. Anderson, was appointed assistant observer at Jacksonville in 1918. In 1921 he was transferred to the Central Office and remained there, in the old Forecast Division, until 1926. He was then returned to Jacksonville, to remain until 1937. In that year he was placed in charge at Asheville, N. C. Another transfer the following year took him once more to Washington as supervising airway forecaster at Washington National Airport. Regionalization gave him an opportunity for different experience, and in 1942 he became Regional Liaison Officer at the Atlanta Regional Office. Mr. Anderson was promoted to assistant regional director in 1946.

With transfer to Jacksonville, Mr. Anderson becomes section director for a State some 58,600 square miles in extent. Florida's annual farm income, mainly from highly perishable fruits and vegetables easily subject to damage from bad weather, amounts to about $330,000,000. In addition to general weather service, Mr. Anderson will be responsible for storm and hurricane warning service to both coasts of northern Florida and for 22 of the State's 67 counties. A separate airport station with an important program of aviation service is also under his general direction.

CHANGES IN OCEAN STATIONS

Effective September 3, 1949 Atlantic ocean station FOX lat. 35°N., long. 40°W., was discontinued and stations DOG and EASY were relocated at lat. 44°N., long. 41°W. and lat. 35°N., long. 48°W., respectively.

WBO DES MOINES AIDS COSMIC RAY WORK

In the language of the baseball diamond WBO Des Moines may be credited with an "assist" in the field of cosmic ray research. This cooperation is described by OIC C. E. Lamoreaux in a recent issue of the Region III News Letter.

The Department of Physics at the Iowa State College is engaged in research concerning the propagation of hydrogen "mesons" in connection with cosmic rays penetrating the upper levels of the atmosphere. The project itself is described by a researcher in the Department of Physics as follows:

Cosmic rays consist of particles that bombard the earth, apparently coming from outer stellar space. These particles consist mainly of the very energetic hydrogen nuclei (atoms with the electron removed). The energy of these incoming particles may be several thousand times greater than that produced by the largest atom smashing machine. If one of these particles should make a collision with another atom, complete disintegration of the atom may occur. Occasionally mesons are created by these nuclei. These particles, mesons, are unstable and spontaneously disintegrate into an electron in about a millionth of a second. The tracks of these particles can be seen in special photographic plates.

To further this study, the Physics Department has prepared special photographic plates to be exposed at high levels up to 70,000 feet. The equipment, which includes a pressure-indicating device and a small clock for timing, is carried aloft by a sounding balloon. It is essential that the photographic plates be recovered as soon as possible and within reasonable distance of the point of release. The Des Moines office cooperates with the Physics Department to the extent of furnishing winds aloft from surrounding stations, particularly from the RAWIN stations at Columbia, Mo., and St. Cloud, Minn., prior to and during the flight.

The first flight was made July 16 and was quite successful. Winds aloft were light, and it was estimated that the parachute with the exposed plates would come down in Iowa between Grinnell and Cedar Rapids. The balloon was released at 1120 and the parachute descended about 1400 on a farm approximately 20 miles north of Grinnell. It was found by a farm boy about five hours later. The clock was still ticking, so the farm family left the instrument strictly alone until the clock ran down. It was returned to Ames in good condition. The baroswitch indicated that the balloon had reached altitude of almost 70,000 feet.

Other ascents were made every two or three weeks during the summer season. Publicity for the flights was given by radio stations in order to alert persons in the areas where the parachutes were expected to descend, so as to recover the instruments with the least delay.

RESEARCHER HONORED

Dr. Oliver R. Wulf, research meteorologist at WBO Los Angeles, has been elected to membership in the National Academy

of Sciences because of his outstanding investigations of solar and terrestrial relations, ozone, ionosphere, physics and chemistry of the upper atmosphere, and of the relations between meteorology and physics. Dr. Wulf holds the rank of full professor at the California Institute of Technology.

C. O. OFFICIALS VISIT FIELD

During July, August, and September nearly 80 field stations were visited by the Assistant Chief of Bureau for Operations or by the Chief of Bureau.

Dr. Reichelderfer, at the end of August and the first week in September, incident to attendance at meetings in Boston and Lake Success, took the opportunity to visit the stations at Albany, Boston, Hartford, Providence, New York City, and Trenton; also cooperative stations in Massachusetts, New York, and New Jersey. At Lake Success he attended meetings of the United Nations Scientific Conference on Conservation and Utilization of Resources. Merrill Bernard, C&HS Division chief, was the official Weather Bureau representative at other sessions of this conference. Dr. Reichelderfer also visited WBAS Cleveland later in September during an inspection trip with the National Advisory Committee for Aeronautics.

In a period of 54 days, Mr. Little made a record-breaking inspection trip by automobile and airplane, visiting more than 70 stations. Leaving Washington July 21, he traveled through the Northern States to Seattle, south along the coast to Los Angeles, east through the southern part of the country to Knoxville, and finally north again to Washington, D. C., arriving "home" September 12. In Idaho, Mr. Little was joined by Regional Director Floyd Young of RO-6 for the inspection of fruit-frost districts in Idaho, Washington, Oregon, and California. They continued together in a regional office car until they reached Los Angeles. Detailed plans for the trip were worked out ahead of time so that each official in charge was notified a month in advance the day and time of the expected arrival.

FIVE RECEIVE SCHOLARSHIPS

Scholarships for advanced university study in meteorology during the school year 1948-1949 have been awarded to five Bureau employees. Of these, Region II garnered two, Regions VI and VII one each, and the Central Office one. The scholarships went to: Emmett E. Baldwin, airway forecaster at WBAS Miami; Chester L. Glenn, airway forecaster at WBO Billings; Roderick D. Graham, district forecaster at WBAS Los Angeles; Albert V. Hardy, professional assistant at WBO Tallahassee; and William Malkin, prognostic analyst in the WBAN Analysis Center. Mr. Graham is attending the University of California at Los Angeles; the other four chose New York University.

MEANINGS OF CONTRACTIONS

The development and use, during recent years, of new methods of observation have resulted in the adoption of a number of contractions which are rapidly coming into common meteorological usage. These contractions are usually coined by joining selected syllables of significant words, e.g., RAOB signifies RADIOSONDE OBSERVATION. Since many Bureau employees may not be familiar with all of these contractions, they are listed below, together with their meaning.

RADIOSONDE - An instrument consisting of several meteorological measuring elements combined with a small radio transmitter, designed to be carried aloft by a free balloon.

RAOB - Radiosonde observation made by obtaining a record of temperature, pressure and relative humidity from radio signals received from a balloon-borne radiosonde.

PIBAL - Pilot balloon observation made by tracking a balloon (attached light at night) with a theodolite. From the vertical and azimuth angles as recorded each minute, and the assumed ascensional rate of the balloon, the upper winds are determined for various heights between the surface and the maximum height of the observation.

RAWIN - Upper wind observations by means of radio or radar method. The following methods are employed in taking rawins:

(1) At Weather Bureau land stations a balloon-borne radiosonde is tracked by means of radio direction-finding (RDF) equipment. From the vertical and azimuth angles obtained from the RDF unit, and heights derived from the radiosonde record, the upper winds are determined.

(2) On ocean station vessels a balloon-borne reflector target is tracked with a radar unit that yields data in terms of azimuth angles and slant range. Height data, necessary to compute the upper winds, are determined by (a) attaching a radiosonde to the same balloon carrying the target, in which case the heights are obtained from the radiosonde record: and (b) attaching a wire target to a balloon, without radiosonde attached (usually a 100-gram balloon) in which case the heights are obtained from the assumed ascensional rate of the balloon.

(3) At some military stations a balloon-borne radar target, without radiosonde attached, is tracked with a radar unit that yields data in terms of vertical and azimuth angles, and slant range, from which the upper winds are determined.

RAWINSONDE - Combined raob and rawin. It will be noted that the contraction RAWIN as indicated in (1) and (2) (a) above, designates the upper winds portion of a rawinsonde. (The use of the contraction RASON to designate this type of observation

has been discontinued by the Weather Bureau.

RABAL - Upper wind observation made by tracking with a theodolite a balloon with radiosonde attached. Upper winds are computed by using heights derived from the radiosonde record, and the vertical and azimuth angles obtained from the theodolite.

ABOB - Meteorological sounding made by means of an aircraft flight.

SFERICS - (Contraction of atmosphere) Observations made with radio direction-finding equipment of electro-magnetic waves produced by atmospheric lightning, the position of the lightning being determined by traingulation based on simultaneous observations from two or more stations.

No contraction has been adopted for radar weather observations, however, a radar weather observation report is called a RAREP.

CARTER RETIRES WITH 45 YEARS SERVICE

When Harry G. Carter joined the Weather Bureau as a printer at Lincoln, Nebr., in 1904, he was only 21, but had already published his own newspaper, had been associate editor of another, and had worked as a printer for several years. Now, on September 30, more than 45 years later, he has retired as OIC at Duluth. Mr. Carter became an observer in 1907 and remained at Lincoln until 1932. He was then transferred to Boise as OIC and section director for the State of Idaho. From Boise he transferred in 1941 to the position at Duluth.

The local service for the Duluth station includes a population of 200,000. For this area the station prepares local forecasts, storm and small craft warnings for Lake Superior in the area. Four storm-warning display stations are supervised. The station maintains local climatological records and provides local climatological information for industrial, commercial, transportation, horticultural and other interests in Duluth and vicinity.

Mr. Carter may be addressed at 1212-22nd Street, Superior, Wis.

CALL FOR PERIODICALS

The Central Office Library is collecting files of back issues of the following periodicals:

American Meteorological Society -- Bulletin and Journal of Meteorology
American Geophysical Union -- Transactions
Royal Meteorological Society -- Quarterly Journal

These are needed for special projects within the Bureau and for foreign exchange. Anyone having surplus copies of these titles for the years 1938 through 1949 who is willing to contribute them is requested to send them to the Central Office Library. Broken sets and individual numbers are acceptable. Any contribution for these years will be greatly appreciated.

PERSONNEL ACTIONS AFFECT 400

Approximately 300 professional and subprofessional employees have gained permanent Civil Service status, and about 100 more have been affected in various other ways by recent personnel developments in the Bureau. The largest group of "war service" and temporary employees were given permanent appointment from the Civil Service register for meteorologists.

Following up on the plan of having P-2 observer-briefer positions at a number of busy airport stations (see July TOPICS), a total of 62 such positions have been established at 11 stations. These are Buffalo, Burbank, Houston, Indianapolis, Jacksonville, Memphis, Milwaukee, Seattle, St. Louis, Tulsa, and Wichita. This action resulted in dropping 56 SP-6 meteorological aid positions.

We do not have complete reports from all regional offices, but it is believed that nearly all the meteorological aids concerned (except those without permanent status) have been placed at other stations. No further displacement of this sort is foreseen in this fiscal year. The complete plan for use of P-2 observer-briefers, which may eventually affect 30 to 40 stations, will take several years to carry out.

Orders from the Civil Service Commission required displacement of all non-status meteorologists by September 30, 1949 and directly affected 39 war-service professionals. Only 16 of these could not be retained in the Bureau; the other 23 were eligible for appointment at a lower grade and accepted such assignments to acquire permanent status.

Necessary displacement actions were conducted strictly in accordance with Civil Service regulations. In making appointments from Civil Service certificates eligible persons are considered in groups of three, one of whom must be appointed. The highest three on the register are considered first, then the two in this group not selected plus the next lower man on the list, and so on down.

Every effort was made to reach "war service" and temporary employees on the registers before actions to displace or demote them were initiated. When demotions were necessary, loss of pay was minimized by appointment at the top salary level of the lower grade. In all cases these employees can be considered for promotion at the end of six months, and their experience in the higher grade increases their opportunities for promotion as vacancies appear.

When a person is appointed to permanent status his name is removed from all levels of the register. Thus, a P-2 temporary employee with standing on both the P-2 and P-3 registers would probably be reached first on the P-2 list. If he accepted permanent appointment from the P-2 list his name was automatically removed from the P-3 register. The appointment procedure is in accord with Civil Service regulations, and is subject to review

at any time by representatives of the Commission.

Now that the Civil Service Commission's displacement order has been complied with and all meteorological positions have been filled by persons with competitive status, future vacancies will be filled by promotion, by reassignment without promotion, or by appointment from competitive registers. It will be the usual practice to draw from the register only when qualified eligibles are not available within the Bureau.

TOLEDO CONSOLIDATED: COLEMAN OIC

As the result of the retirement last March 31 of Frank E. McLeary, until that time OIC at WBO Toledo, the city office and airport station have been consolidated at the airport. Don E. Coleman, who has been in charge at WBAS Toledo since 1939, has been promoted and made OIC of the consolidated station.

Mr. Coleman, now 39 years of age, joined the Bureau in 1929 as a junior observer at Detroit. During the 9 years he was stationed there he attended Wayne University although he did not secure a degree before being transferred in 1938. The transfer, however, took him to Toledo as first assistant of the newly-opened airport station. The following year he was placed in charge of WBAS Toledo. His outstanding performance in that position left no doubt in the minds of Central Office officials that he should be made OIC of the consolidated station.

As OIC of WBO Toledo, Mr. Coleman will be responsible for a complete 24-hour surface and upper-air observational program; local aviation service for approximately 24 scheduled and 100 local non-commercial flights daily; general weather service to a population of approximately 600,000; special advisories to extensive horticultural; industrial, and farming interests, and forecasts of wind and sea, as well as storm warnings, to marine interests.

BINDING CLIMATOLOGICAL DATA

In C&HS memorandum of February 8, 1949, to all first-order stations, it was announced that it would no longer be possible to bind Climatological Data in monthly or quarterly volumes due to their increased size. Further experience with Climatological Data, however, has shown that monthly volumes can be bound. Therefore, monthly binding in paper covers for those recipients who receive all 42 sections will be resumed with the bulletins for the month of July 1949, and the plan of binding 12 monthly and one annual volume for each section at the end of each year as outlined in the February 8, 1949 memorandum has been dropped.

Monthly binding in buckram for the 35 Section Centers, including Hawaii, Alaska, and San Juan, will also be resumed, effective with the month of July 1948, so as to give all centers a complete file of buckram bound copies.

FORECASTERS ASSIGNED TO IRELAND

Six Weather Bureau meteorologists have recently been assigned for a two-year span of duty with the Irish Meteorological Service, under an agreement with the Irish Department of Industry and Commerce. The six selected were: John R. Berger, FAWS supervisor at WBAS Ft. Worth; Robert B. Carter, FAWS forecaster at Cleveland; Raymond C. Crooks, airway forecaster at WBO Seattle; Sanford K. Miller, research forecaster at WBAS Denver; Richard E. Myers, FAWS forecaster at WBAS Denver; and David H. Shideler, airway forecaster at WBO Billings.

Under the agreement the men must serve in Ireland at least two years, and are assigned for duty at the Shannon Airport Meteorological Office. They will remain on the regular Weather Bureau rolls, will work 40 hours a week, and will be entitled to the normal leave and holiday privileges of United States employees. The Department of Industry and Commerce will reimburse the Weather Bureau for the pay and transfer expenses of the American weathermen.

HYDROCLIMATIC INSPECTOR DIES

Thomas F. White, hydroclimatic inspector at the Fort Worth Regional Office, died September 5 after a very short illness. Mr. White, 49 years old, had been with the Bureau since May 1942 when he was appointed as assistant observer at Houston airport station. For 20 years prior to that time he had been a teacher and administrator in Texas public schools. He held Bachelor of Science and Master of Arts degrees from Southwest Texas State Teachers College. Mr. White was transferred to Fort Worth as a hydrologic inspector in December 1944.

ANSWERS TO EMPLOYEE INQUIRIES

From time to time field employees have reported not receiving replies, or even acknowledgements, to letters addressed to the Central Office on personal matters. In such cases, if no reply is received in a reasonable length of time, the failure should be brought to the attention of the Central Office so that required action can be taken. It is now standing practice to answer every inquiry from a field employee, even if it can be acknowledged with a note that the information desired is not available.

Inquiries or suggestions which can be answered by the official in charge or other field official should, however, be handled at that level. The Central Office desires to hear from employees on matters of importance, but its limited staff and an already great volume of correspondence sometimes prevent giving immediate attention to such letters. Unnecessary correspondence only makes it more difficult to deal with those matters which cannot be acted upon elsewhere. When a letter to the Central Office is necessary, it will be given every consideration possible under the circumstances.

ANTARCTIC CAPE NAMED FOR CHIEF

"Cape Reichelderfer" in the Antarctic now commemorates the name of the Chief of Bureau. The Cape, on the east coast of Palmer Land, on the Weddell Sea, was named for Dr. F. W. Reichelderfer by Finn Ronne, the famous Polar explorer, during his last expedition to the Antarctic continent.

This is the second cape in the South Pole regions to bear the name of a Weather Bureau official. In 1948, Finn Ronne named a glacier for D. M. Little, Assistant Chief for Operations. This was later changed by the Board of Geographical Names and another cape on the east coast of Palmer Land was designated as "Cape Little."

DOMINICA OBSERVER RETIRES

Louis Gaubert, who has served the Bureau in an observing capacity at Roseau, capital of the Island of Dominica, British West Indies, since 1917, retired September 26 on account of disability. Mr. Gaubert, who is 51, was a special observer from 1917 to 1942, and has been an airway observer since that year. His address is Cook Street, Roseau, Dominica, BWI.

TECHNICAL PUBLICATIONS DISTRIBUTED

The following publications were distributed to Weather Bureau offices during June and July:

"An Objective Method of Forecasting Rain in Central California during the Raisin Drying Season", by Donald L. Jorgenson, reprinted from Monthly Weather Review, vol. 77, No. 2, February 1949. Mailed to forecast offices.

"Temperatures at Selected Stations in the United States, Alaska, Hawaii, and Puerto Rico", Weather Bureau Technical Paper No. 9, Washington, 1949. Mailed to all first order stations.

NACA Technical Report 1904, "Observations of Icing Conditions Encountered in Flight during 1948", by William Lewis and Walter H. Hoecker, June 1949. Mailed to forecast offices.

"Second Partial Report on Artificial Production of Precipitation, Cumuliform Clouds, Ohio 1948" by R. D. Coons, E. L. Jones, and Ross Gunn, Weather Bureau Research Paper No. 31, Washington, 1949. Sent to all first order stations.

"An Objective Method of Forecasting Five-Day Precipitation for the Tennessee Valley" by William H. Klein, Weather Bureau Research Paper No. 29, Washington, 1949. Sent to all first order stations.

SIMPLIFYING PUNCH-CARD INVENTORY

To simplify the weekly inventory of punch card stock on hand, on the WBAN #7 Card, the drawers of the metal storage cabinets may be marked off in 0.7 inch spaces. Since 1000 cards take 7 inches of space, each sub-unit of 0.7 inch will accommodate 100 cards, and the total number on hand can be determined at a glance.

WEST RETIRES AFTER 42 YEARS

Ralph C. West, official in charge at WBO Scranton since 1930, retired September 30. He had completed more than 42 years of service which began June 1907 as an assistant observer at Charlotte, N. C. During the next 10 years Mr. West was stationed at St. Louis, Mo.; Birmingham, Ala.; Richmond, Lynchburg, and Bluemont, Va.; Helena, Mont.; and Alpena, Mich. In December 1917 he was placed in charge at Port Huron, Mich., remained there until 1930, at which time he was transferred to Scranton, as OIC.

Mr. West's address is Box 611, YMCA, Scranton, 3, Pa.

RAWINS FOR PIBALS AT FOUR PLACES

Six-hourly RAWINS have been substituted for PIBALS at four locations in the United States. On August 1, PIBALS were discontinued at the Weather Bureau at Ypsilanti (Detroit), Mich., and Tucson, Ariz. As of September 1 they were stopped at Denver and Kansas City. Instead of the Weather Bureau PIBALS the Air Force's Air Weather Service is now taking RAWINS at Air Force Bases near the above locations. Four RAWINS are now being made daily at Selfridge Field, Mich.; Davis-Monthan Field, Ariz.; Lowry Field, Colo.; and Sherman Field, Kans.

WASHINGTON WEATHER CALLS TOP RECORD

The month of July was an all-round record breaker for the Washington, D. C. automatic telephone forecast service. All-time high numbers for the city were set for a single day, for the month as a whole, and for the average daily calls throughout the the month.

For the whole month the number of calls on WE 1212 reached the record total of 2,613,359; the previous record was 2,393,371 set in May 1949. The daily average during July was 84,302, breaking the previous all-time record average of 74,002 in April 1949. July 28 was notable for the record 178,027 calls received on the automatic system during an unusually hot and humid period in Washington. Prior to this, February 10, 1949, with 146,192 calls, was the record day for the city.

The all-time record of telephone calls anywhere still stands at 267,952 for a single day set on the Detroit automatic telephone system.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

WEATHER BUREAU

TOPICS

VOL. VIII NOVEMBER 1949 NO. 47

IN THIS ISSUE

AMS TO BE 30 YEARS OLD

Returning to the scene of its birth, the American Meteorological Society will celebrate its 30th birthday in St. Louis, Mo., at its annual meeting January 4-6, 1950. Details of the meeting will reach members through Society channels. It is expected to be an outstanding session and Weather Bureau employees are encouraged to attend whenever practicable.

The AMS was organized in St. Louis, December 29, 1919, after several months of intensive effort to contact all groups and individuals who would be interested in the formation of such a society. The man who more than any other single individual was responsible for the organization of the AMS, Dr. Charles F. Brooks, was elected the Society's first Secretary and has been reelected to that post every year to the present day. The Society has grown in numbers and in the importance of its work, so that today it is the recognized organ of professional meteorology in the Western Hemisphere.

AIRPORTS ADVISORY COMMITTEE ESTABLISHED

To utilize "the vast fund of managerial experience and knowledge of leading figures in airport operation and management," a 12-man Airports Advisory Committee has been set up by the Civil Aeronautics Administration. The committee is to serve as an advisory group to the CAA on all phases of airport management, operation and maintenance.

At its first session in Washington in September, the Committee elected A. B. Curry, director of the Dade County Port Authority, Miami, Fla., as chairman. Walter E. Betsworth, manager, Waterloo Municipal Airport, Waterloo, Iowa, was elected vice-chairman. Members of the committee were presented with certificates of membership by Senator Kenneth Wherry of Nebraska, who praised the group for serving without pay "so that you can develop the most uses of airports, maintain the ones that we have, and, if possible, get more airports in the interest of aviation."

MIT PROJECT PROGRESSES

The cooperative research project now being carried on by the Weather Bureau and the Massachusetts Institute of Technology for collection and analysis of Southern Hemisphere synoptic data is now nearly a year and a half old. Begun July 1, 1948, it has made considerable progress toward its objective under the supervision of Dr. H. C. Willett of MIT.

Maps prepared in this project are intended primarily as a tool for the study of the general circulation of the Southern Hemisphere, particularly in relation to that of the Northern Hemisphere. For this reason, great emphasis is placed on getting a maximum amount of data on the maps. Final analysis of the maps may be delayed up to six months to allow for collec-

tion of as much supplementary data as possible by mail. As rapidly as each six-month series of maps is completed it will be reproduced on microfilm. Copies can then be supplied to cooperating agencies and others who have a need for such information.

It was originally intended that the project would analyze Southern Hemisphere maps essentially on an up-to-date basis, using data received by radio. However, it soon became apparent that drawing a complete hemispheric map on the basis of radio reports alone would be very difficult. Therefore, radio reception of data, because of inadequate coverage, has been largely supplanted by mail reports, although the radio reception is being continued in hope of increasing the coverage

To implement the mail collection of reports, a circular letter was sent out by the Bureau to directors of the various meteorological services, requesting their cooperation. Response to this request has been gratifying, with 19 countries now sending in mail reports.

As maps for each six-month period are completed at MIT, the data collected will be forwarded to the Weather Bureau Tabulation Unit at New Orleans, where they will be kept available for future use.

OTHERS CAN BE WRONG TOO!

Electric power people are sympathetic with weather forecasters, for they too sometimes have difficulty with their predictions. Representatives of Pennsylvania power companies, meeting with Weather Bureau officials in Washington in April to discuss weather services, related the following experience to illustrate how hard it sometimes is to forecast the need for electrical energy:

In January 1925 a total eclipse of the sun occured in New England. If there was ever a time that New England would have its greatest load, it would have been during the period of totality which was due to begin at 9 a.m. For days before this phenomenon, estimates had been made by superimposing lighting load on top of the power load. It was discovered that the full capacity of the system would be necessary to carry the load. Shortly before 9 a.m. the hydro plants were unloaded so as to permit maxium steam generation before totality. The general plan of attacking this problem was to have the steam at the maximum and as the shadow swept across New England the increase in lighting load would be taken on the fast hydro. The plan of operation appeared to be a perfect one. However, at 9 a.m. the load began to decrease and as the sun became obscured, rapid decreases in load were noted, and at totality a complete collapse in the load resulted. With this collapse in load the hydro plants went to motor and we found ourselves with high steam capacity and no load, resulting in steam boilers blowing off, coupled with high speed which was brought under control with some difficulty. In estimating the load for this event, we overlooked the fact that instead of turning lights on, the population turned them off. Mills and factories shut down to permit millions of people to observe this phenomenon. If, however, a total eclipse of the sun were to occur again in New England, we would plan the operation the same way because you can never predictwhat the public is going to do.

PROMOTION REVIEW BOARD MEETS

To review the list of professional employees qualified for promotion and to consider other questions pertaining to professional qualifications and recommendations for promotions to fill vacancies in authorized positions in the professional grades, a special board held conferences in the Central Office from September 26 to October 7. This group, called the "Professional Qualifications and Promotion Review Board" for lack of a more definitive and convenient name, consisted of responsible and experienced field and Central Office officials, selected for their interest in and familiarity with the Bureau's overall assignments and promotion problems. Shortage of travel funds prevented wider field representation, but the general service viewpoint was ably presented by the officials selected to attend.

Members of the Promotion Review Board included: W. J. Moxom, Regional Director, New York, Chairman; R. E. Spencer, Central Office, Executive Secretary; Merrill Bernard, Chief, C&HS Division; L. W. Bosworth, Chief, Placement Section; L. E. Brotzman, Chief, P&PMO; Glenn Jefferson, Regional Director, Anchorage; R. C. Schmidt, OIC, Washington National Airport; C. G. Swain, Chief, Personnel Division; I. R. Tannehill, Chief, SR&F Division; C. F. Van Thullenar, Assistant Regional Director, Kansas City; and Floyd D. Young, Regional Director, Los Angeles. Others who attended sessions of the Board and made contributions to its work included: A. V. Carlin, Chief, Training Section; R. N. Culnan, Scientific Services Division; V. W. Powell, Chief, Classification Section; A. L. Shands, P&PMO; and R. H. Simpson, OIC, Honolulu.

In order to secure the advantage of the service-wide viewpoint represented in the Board, several days of the conference were devoted to analysis and recommendations regarding pending personnel cases involving reallocation of jobs and/or changes of status of individual employees. The question of length of assignment to outpost stations was also discussed, and constructive recommendations by Messrs. Jefferson and Simpson were adopted in dealing hereafter with such assignments. The main purpose and effort of the conference was directed, however, to devising better means for evaluating the abilities of employees so that promotions and assignments can be considered in a way to serve fairness and equity as between employees, and at the same time contribute to the overall service of the Bureau.

The first result of these deliberations will appear in use shortly as an "Abilities-Report Form" to be filled out for each professional employee by his immediate supervisor and forwarded to the Central Office through the Regional Director. Central Office records of length of service, amounts and kinds of education, and records of efficiency are now relatively com-

plete; the new form is designed to round out this information with a measure of how good each employee is likely to be as a workman in one or more categories of the Bureau's work. With this added information on experience or interest the Central Office can better judge whether the employee chosen for a promotion or reassignment actually has the special or potential ability required for specific jobs such as official in charge, ocean-weather forecaster, climatological analyst, hydrologist, and others.

NEW FIRE-WEATHER DEVELOPMENTS

New developments in the use and techniques of fire-weather forecasting are giving added assistance to foresters in anticipating forest fires and planning firefighting operations. Two separate reports have come to us concerning these developments.

The magazine, West Virginia Conservation, reports that, in addition to the many other uses of fire-weather forecasts, one ranger in 1949 used the predictions as a basis for computing the number of forest fires to be expected each day. His average daily accuracy was 93 percent for a 41-day period during which 264 fires occurred.

When only one or two fires are expected, the magazine explains, more men are available for work on planned projects. When 17 to 20 fires are expected, full-time personnel of the district are held on an "alert" basis, radio stations and newspapers urge the public to be careful with fire, and all part-time crews are placed on the payroll ready for action.

The West Virgnia State Conservation Commission is installing the "fire occurrence" system in all districts of the State.

The annual report from the fire-weather center at Asheville, N. C., informs us that a code being used to transmit pin-point 30-hour forecasts by commercial telegraph to 87 forest administrators in the district has resulted in an annual reduction of $4,000 in communication costs. The code, developed at Asheville, includes, in nine 5-figure groups, the following information which is "tailor-made" for individual ranger districts:

Today - Sky cover, or kind and amount of precipitation, maximum temperature, minimum fuel moisture, wind direction and velocity.

Tonight - Same elements except that minimum temperature and maximum fuel moisture are substituted for the maximum temperature and minimum fuel moisture.

Tomorrow - Same elements as "today."

Foresters report that they are well pleased with both the code and the accuracy of the forecasts.

NAVY OCEAN STATION DISCONTINUED

The U. S. Navy discontinued operation of Pacific ocean station JIG (lat. 44°N, long. 165°E) on October 1, 1949.

FORECASTS AID YACHT RACE

Record-breaking sailing speeds attained by contenders in the Transpacific Yacht Race from San Pedro, Calif., to Honolulu in July are generally attributable to the weather forecasting for the race, according to the September issue of Sea, "The Pacific Yachting Magazine." Four yachts undercut a 26-year-old elapsed time record, and all vessels found the wind to be the strongest and steadiest ever encountered.

The overall winner of the contest (based on type of vessel and other factors) was the 46-footer, Kitten, but the first craft across the finish line off Diamond Head was the Morning Star. The latter's elapsed time for the trip -- 10 days, 10 hours, 13 minutes, 9½ seconds -- was approximately 28 hours less than the previous record set in 1923. The Morning Star's average was 228 miles per day; her best day was 251 miles, her worst, 204. Three other yachts also broke the 1923 record.

The exceptionally strong and steady winds encountered were no different from normal winds for the area during July, say Forecasters A. K. Showalter and "Bob" Allen (a private meteorologist who accompanied the race). They believe the difference was in the ability of the yachts to remain in the wind as the result of the wind forecasts given them.

Mr. Allen sailed aboard the Morning Star, which was the communications vessel for the fleet. Each day weather reports were collected from all craft and transmitted by the Star to Los Angeles for analysis by OIC Showalter and his staff at WBAS Los Angeles. Forecasts for the succeeding 24 hours were then relayed back to the Morning Star and interpreted by Mr. Allen to the fleet. The Honolulu Forecast Center also assisted in developing the forecasts. All forecasters were operating under a handicap, as the stevedore strike in Honolulu resulted in a lack of the usual reports from steamships between the Islands and the United States.

The Commodore of the Transpacific Yacht Club, who likewise sailed on the Morning Star, commented that he had never experienced such a voyage on a "windjammer." In all his previous experience, he said, he had been becalmed at least part of the time, but on this occasion it was "like being on a destroyer."

The records made in the race also revived serious speculation concerning a come-back of cargo-carrying windjammers. It was recalled that prior to World War II, German "square riggers", carrying cargoes up to 6000 tons, had averaged 7 knots over all their voyages, and had operated at a profit. Now, if good forecasts like those for this race were to become the rule, and such record-breaking speeds could be maintained, some enthusiasts believe that opportunity might once more knock at the door of those who feel that windjammers have a place in commercial shipping.

AIRPLANE TRACKS TORNADO

Something new in the use of pilot reports has been brought to our attention by H. C. Winburn, OIC at WBO Amarillo. Radioed reports from the pilot of an airplane flying near Amarillo one day last summer kept the Weather Bureau Office informed of the progress of a tornado in the vicinity and enabled the Amarillo office to broadcast warnings to towns in its path. Mr. Winburn reports as follows:

A tornado had been reported southwest of Conway and investigation indicated that others had been sighted at Claude and St. Francis. Cessna NC 89852, Pilot Williams, en route TCC-HBR, was over about this time and advised of the thunderstorm activity and the reported tornado southwest of Amarillo. He turned south to go around the thunderstorm and reported back that he encountered severe turbulence 25 miles southeast of Amarillo but had sighted no funnel. We asked him to keep a watch for the funnel, but to keep south and west of the turbulence. He reported back that he had sighted the funnel near Claude, kept it in sight about 10 minutes, and that it appeared to be moving northeast at about 20 miles per hour. Static was so bad that he couldn't read Amarillo Radio, so he came back to the field and landed at 1700C. His report verified the reported tornado. We broadcasted warnings to towns northeast of the location. We based its speed and direction of movement on that report and removed warnings from those areas in subsequent broadcasts as the storm progressed northeastward. The cloud was sighted again at Whitedeer and did sonsiderable damage at Lefors later that evening.

Another report a few days earlier had assisted in verifying a reported tornado near the Texas towns of Dawn and Umbarger, although the pilot in this case did not actually sight the funnel. He had reported severe turbulence and "dust rising from the ground." Since rain had been falling in the area all day, dust appeared impossible, so flying debris raised by the reported tornado seemed the only answer. Thus the existence of a tornado was verified.

TORNADO DATA NEEDED

Both the Chicago Office and the Central Office are making studies of the nature of tornadoes and the process which leads to their occurrence. A serious handicap to study of this phenomenon is the shortage of good data. The Chicago City Office, for example, wants data obtained in the immediate vicinity of tornadoes. Will any station which has had a tornado pass within a few hundred feet at any time in the past please communicate that fact to the Research Forecaster at Weather Bureau Office, 1400 U. S. Court House Building, Chicago. The date, hour, maximum wind and/or extreme wind during tornado passage, copy of the barograph trace, or the amount of pressure fall attending the passage of the tornado, and any other circumstances that can be remembered or gleaned from the record should be included.

ACTION ON PUBLIC CRITICISM

Like any other Government agency, the Weather Bureau may on occasion be subject to criticism from the public. Whenever adverse comments appear in the press, on the radio, or in public speeches, it is Bureau policy to make an immediate investigation to see whether our services are at fault. In most cases the local official in charge should arrange for an interview with the critic to help determine the facts, and then report the matter immediately to the Central Office.

Such an interview will not only show that the Bureau is not indifferent to public dissatisfaction with its services, but may also bring out specific instances which will point the way to improvements by the local office, the forecast center, or the Central Office. The following excerpt from a letter from the Chief of Bureau to the writer of an antagonistic editorial is a good statement of the Bureau's position in such matters.

> Although your suggestion that Congress investigate the Weather Bureau to ascertain what is the matter with it is not taken lightly, I am sure that every meteorologist would welcome such an investigation, if it would find the way to eliminate the difficulties and uncertainties of weather forecasting. I am also sure that it would bring out the fact that the Weather Bureau's forecasts are, on the whole, as accurate as those made by weather forecasters anywhere under comparable circumstances. The Bureau keeps very closely in touch with meteorological developments throughout the world and with research work in the universities and in other meteorological institutions. It employs the latest and best methods of forecasting. Our forecasters and local officials probably regard the deficiencies in forecasting even more seriously than does the general public and I believe they do the very best that they or anyone else can do with the science of meteorology and the art of weather forecasting in its present stage. The fact remains that in most places and for most purposes, weather forecasts are incorrect in approximately 10 to 20% of the cases.
>
> If our forecast accuracy falls below 80% in any locality over a period of a month or two, we assume there may be something wrong and we review the record and take whatever action is possible under the circumstances. In some cases we have received the assistance of local authorities and editors in keeping a daily record for a few weeks in order to reconcile any differences there may be between the views of the general public and those of our offices as to the local results. If you think it would be worthwhile to keep such a record for a few weeks,, we will make the necessary arrangements through our local office.
>
> While I do not minimize the bad effects of inaccurate forecasts, the Weather Bureau knows from its field surveys that the benefits resulting from the forecasts which are correct in 80 to 90% of the cases, are very large in comparison. Meteorologists everywhere are working to improve forecasting services but the problems are very complex and when it is taken into consideration that there are many variables in the three-dimensional processes of the weather which the meteorologist has no means of observing or measuring at the present time, it is surprising that forecasts for severe storms and other weather disturbances are as accurate as they are.

In no case should a serious criticism be ignored. Whether the criticism is justified or not, we can learn from it and the Bureau will profit thereby.

WEATHER AFFECTS PRICE OF LEAD

A new ramification of the effect of weather on the business economy was related to the Chief of Bureau at a recent meeting of the Business Advisory Council of the Department of Commerce. An official of the coal industry sitting next to the Chief told him that lack of information on the mild weather last winter not only vitally affected the coal business, but had contributed to a break in the market price of lead. As explained, the normal winter wear and tear on automobile and truck storage batteries is an important factor in the demand of lead. But last winter the relatively warm weather was so kind to batteries that the demand for lead was much smaller than usual, resulting in a drop in the price of the metal. This has stimulated an intensified interest in in the possibilities of long range forecasts.

SUGGESTION AIDS VISIBILITY REPORTS

Daniel J. Maguire, observer-briefer at WBAS St. Louis, has been awarded $15 for his suggestion of a photographic chart showing a panoramic view of the horizon around each observing station. The suggestion has been adopted by the Bureau and when implemented is expected to aid the reporting of visibility. The idea was tried out at Washington National Airport where photographs were taken with the camera pointed in 16 directions from the observation point. From these, a panoramic view was constructed, and mounted in the observatory. Reproductions of the WNA panorama have been furnished to field aides with instructions to prepare similar charts for other stations.

FILING AUTOGRAPHIC RECORDS

The question of why triple-register and other autographic records are filed at Weather Records Processing Centers instead of at the station where they originate was recently raised by a field official. His point was that seemingly the only place they are of value is at the station for possible use in court.

Triple-register records are eventually deposited in the Central Office and the National Archives, where they are available for research and storm study projects. Present instructions permit the WRPC to retain the autographic forms for a year so that the records for each station may be microfilmed on an annual basis. The original records are then sent to the Central Office.

Requests for autographic records are very few and since the records for storm studies are usually requested on an area basis the present disposition of these forms is believed the most profitable. If specific autographic records are required for court evidence or research at a field station that may be obtained on microfilm, microfilm prints, or photostats from the WRPC or the Central Office.

FORECASTERS AID SOARERS

Once again this past summer two Weather Bureau meteorologists won the acclaim of soaring enthusiasts for their contributions to the art of motorless flight. Bernard L. (Barney) Wiggin, OIC at WBO Buffalo, and Emil T. (Ted) Lange, airway forecaster at WBAS Fort Worth, served as official meteorologists for meets of the Soaring Society of America. Both men, because of their enthusiastic cooperation and accurate work of previous years, were specifically requested by the sponsors of the contests.

Barney Wiggin officiated at the 16th National Soaring Contest at Elmira, N. Y., in July. Assistance in taking local rawinsonde data and in preparation of charts was provided by an Air Force Weather Service Rawinsonde Detachment, under command of Lt. W. L. Fallowell, especially designed for this project.

Ted Lange was the official forecaster for the 2nd Southwestern Soaring Contest at Grand Prairie, Tex., in August. James P. Groves of the Fort Worth Regional Office MOBEU assisted in the preparation of maps and charts, while telephone consultation with Fort Worth WBAS forecasters provided additional information and advice.

All but one of the National Contests have been held at Elmira. The 14th National Contest was at Wichita Falls, Tex., in 1947. Mr. Lange briefed the many foreign as well as the American sailplane pilots at that meet.

A weather forecaster was assigned to a national soaring meet for the first time at the 10th National Contest at Elmira in 1939. Mr. Wiggin, at that time stationed at Newark Airport, arrived early and observed late. With the aid of an alert Air Corps weather officer, he lectured continuously until his verbal punches shoved complacent pilots from their fledgling slope and dry thermal soaring into the full power and glory of cumuliform cloud riding. After three days of the meet clouds were available and the pilots were mentally conditioned to tackle these castles in the sky which proved to be self-supporting elevators waiting to whisk the soarers to new horizons. The first pilot to venture into a cumulus cloud above Elmira quickly found himself well over a mile above the city. A bit later another pilot entered the cloud at the peak of its development and spiraled within the rising blast to 14,000 feet above Harris Hill -- over three miles above sea level. The previous American altitude record was more than doubled.

Since 1939 the Weather Bureau has continued to supply a meteorological service to American gliding and sailplane activities. All subsequent National Contests have been serviced. Throughout the year local sailplane clubs -- the most active of which are at Buffalo, Chicago, Dallas, Denver, New York, Philadelphia, and several sites in Southern California -- have

received advices from nearby Weather Bureau Offices as to the degree and extent of thernals, kind of wind shear, and imminence and intensity of storm fronts.

Awards Night of the 13th National Contest (1946) saw recognition of Barney Wiggin's work with both civilian and Air Force glider pilots. He was presented with the Warren E. Eaton award "for the outstanding contribution to the art, sport, or science of motorless flight," the only non-pilot to receive the award.

The 16th Contest this summer was one of the smoothest ever held. More miles of flying per take-off were accomplished than ever before, indicating more scientific techniques of the contestants. No records were broken but several outstanding task flights were made.

A joint meeting of the Institute of the Aeronautical Sciences and the Soaring Society of America was also held, with aerodynamics and meteorology being discussed. Dr. Joachim Kuettner of the Institute presented a paper, "The Techniques and Possibilities of Mountain Wave Soaring," which was well received. Standing waves induced by orographic or atmospheric barriers now seem to offer the most promise for record breaking flights by sailplanes.

During the contest it developed that a real effort will be made to send an American team to Sweden in 1950 to enter the international competitions. Heretofore no American team has ever competed. To help with the stiff competition expected, the Soaring Society of America has already requested Mr. Wiggin to make a study of Swedish weather and terrain, and to be prepared to act as team captain if an invading American team materializes.

PRINTING FOREMAN RETIRES

Allen C. Brightenburg, foreman of the Composing Unit of the Central Office Printing Section, retired October 31. He had been with the Bureau more than 31 years as a printer.

Born in 1881 in Raymond, Nebr., Mr. Brightenburg was put to work early. At the age of eight he became an apprentice in his stepfather's machine and cabinet shop in Raymond. Upon completion of his apprenticeship in 1896, he went to work for a bar fixture and supply house in Lincoln. He kept this job two years, then worked as a bookkeeper and clerk for two more. In 1900 he became an apprentice printer. His first Government job came in 1918 with the Government Printing Office in Washington. After six months he requested and secured a transfer to the Weather Bureau at the Lincoln station. In November 1919 he transferred to the Central Office and remained in the Printing Section until retirement. He was promoted to foreman of the Composing Unit in 1932. Mr. Brightenburg's home address is now 5726 MacArthur Blvd., Washington, D. C.

TO GET PIREPS, GO AFTER THEM!

Direct personal contact with the pilot and specific demonstration to him of the need for and uses of pilot-reported weather information are the prime requisites for success in obtaining PIREPS, as the experience of staff at WBAS Des Moines indicates.

In a recent memorandum describing the technique for getting these reports so vitally needed in the development of a well-rounded aviation weather service, OIC Claude M. Holmes states:

> Generally speaking PIREPS are no accident, but represent in the majority of cases, the result of careful planning and execution. A few pilots volunteer information they have obtained in flight, but the majority do not pass their information along. Among the various reasons given are: -- "Information already reported", "too trivial to report", "too much effort for the benefits, not used anyway", "often misquoted", etc.

Methods that have proved successful at WBAS Des Moines in getting reports from local pilots include a pre-flight briefing during which the type of information desired for local use and for teletype transmission is carefully explained to the more weather-conscious pilots. If the pilot comes through later with a PIREP via radio, at the first personal contact after filing the report, a careful check is made with him comparing his information with the transmitted PIREPS, and a copy is given him if possible. Usually he wishes to keep it. This is an important factor in clinching his cooperation for the future. This is followed up as often as possible with a full discussion of all doubtful or weak points, and of course a sincere "THANK YOU" every time.

Private cross-country flyers from other locations, visiting Des Moines WBAS, are encouraged to report all pertinent meteorological information they may have. Here too, when first approached, most of them profess to believe that no one is interested in their reports, some even saying they thought airline pilots' reports were the only ones desired. However, a large percentage seem to get much enjoyment from a discussion of their weather experiences. Sometimes they are critical, more frequently corroborative, but when an interest is definitely shown in their information they are always willing to help and later may make special trips to the Bureau, or use the radio or telephone, to give their reports.

The scheduled airline pilots at Des Moines have generally proved willing to give the information they have, but again much more complete information is available if sought out directly rather than by asking tower or communications personnel to obtain it. "If I'll don a rain coat and paddle through the puddles over to United Air Lines", says Mr. Holmes, "I find the pilots most anxious to repay me for the trip -- they literally dig up everything they have".

Finally, to re-emphasize the value of personal contacts, an actual comparison of reports from radio, tower, and personal

contact has revealed the latter to be the most accurate and complete. This is not necessarily the fault of the radio or tower, but results from convincing the pilot that the information is really needed and used. "When and if we go after it -- they reward effort with effort", says Mr. Holmes.

WBAS TOPEKA OIC RECEIVES AWARD

James T. Arnold, OIC at WBAS Topeka, has been given a $15 award for suggesting the use of a graphical correction curve to speed up the reading of corrections to be applied when recording certain temperatures. Graphs are being prepared for issuance to stations, and accompanying instructions will suggest that stations requiring frequent application of temperature corrections may plot the corrections on the graph. Use of the graph is expected to result in more accurate temperature readings and dewpoint computations, especially at temperatures below freezing.

WEATHERMAN COUNTS SHEEP

Robert O. Werlein, OIC at WBO Northway, Alaska, completed a unique familiarization flight recently when he assisted a Fish and Wild Life Service representative make an aerial survey of mountain sheep and other wild life in the Northway region. A station activity report from Northway details the experience as follows:

Robert Scott, Fish and Wild Life Agent and pilot, arrived from Anchorage in a FWS "Stinson Station Wagon" on September 22 to count mountain sheep. At the invitation of Mr. Scott, Werlein accompanied Scott on the survey made on September 23 which also served as a familiarization flight for Werlein. All mountains were covered in the Chisana Pass, Bebesna Pass, Montasa Pass, Ptarmigan Lake, White River, Snag River, Beaver Creek and Stuver Creek areas. The flight was made through narrow mountain passes and close around the peaks; a landing was made at the deserted village of Chisana, elevation 4000 feet, where the plane was refueled.

A total of 7 hours was spent in the air and a total of 465 Dall sheep was counted. One grizzly bear and two moose were also spotted on the return flight to Northway. During the flight Werlein operated an aerial camera, making shots of sheep and the mountain terrain for FWS. Many active sheep trails were observed, indicating a considerable number of the animals in the area. These signs are encouraging for possible resumption of sheep hunting next year; the season having been closed this year due to depleted flocks.

Valuable information was obtained concerning the terrain and orientation of ranges and mountain passes. This information will be of considerable use to the Weather Bureau in briefing pilots.

CIRCULAR LETTERS CANCELLED

Since Air Force upper air reports are now collected exclusively on Air Force circuits with relays made to Service C, the procedures for coordinating pibal and rawin data are no longer practicable. Therefore, Circular Letters 79-44 dated November 4, 1944, and 9-45 dated January 31, 1945, have been cancelled.

AMENDMENT LIBERALIZES RETIREMENT

The amendment to the Retirement Act contained in H. R. 2944 became law when signed by the President on September 30, 1949.

This Act contains two provisions that further liberalize the annuity features of the Retirement Act.

The first permits a woman to elect to receive in lieu of life annuity a reduced annuity and an annuity after her death payable to her surviving widower equal to 50 percent of such life annuity. This option has heretofore only been available to male employees.

The second, which is of broader application, is a percentage increase in survivorship annuity. It provides that hereafter employees upon retirement would pay only 5 percent on the first $1500 of their annuities, instead of 10 percent. Above that amount the 10 percent deduction will apply. The effect of this is that each retiree with a life annuity of $1500 or over who elects to take survivorship will enjoy $75 more annuity each year.

Assuming that a retiring employee has 30 years of service and the wife or husband is 60 years of age or over, a comparison of annuities under the old and new provisions follows:

5 year average salary	Life Annuity	Reduced Annuity to Retiring Employees		Survivorship Annuity (50%)
		(Old)	(New)	
$1250	$1000	$ 900	$ 950	$ 500
1600	1200	1080	1140	600
2500	1500	1350	1425	750
3500	1800	1620	1695	900
4500	2100	1890	1965	1050
6650	3000	2700	2775	1500
9000	4000	3600	3675	2000

In case the wife (or husband) is less than 60 years of age at time of retirement a further reduction of 3/4 of one percent of life annuity is made for each year under 60, but in no case less than 75 percent of such life annuity. For example should a wife be 12 years younger an additional 9 percent would be deducted. This would reduce the annuity of $950 in the above tabulation to $860, and that of $3675 to $3315.

SUGGESTION MODIFIES FORM 1001-B

Richmond T. Zoch of the C&HS Division has been awarded $15 for his suggestion that heavy lines be printed on WB Form 1001-B, "Surface Weather Observations, Daily Record," between the hour designations of 06 and 07, 12 and 13, and 18 and 19. These heavy lines are expected to make the entering of data easier and facilitate the subsequent transcription of the data, resulting in greater accuracy. A similar practice has been followed on WB Forms 1078 and 1078-B.

WILMINGTON OIC RETIRES

Paul Hess, official in charge at WBO Wilmington, N. C. since 1921, retired October 31. He had reached his 70th birthday on October 16, so the retirement was compulsory. Mr. Hess' more than 43 years with the Bureau began in 1906 at Seattle. He spent the first year at Tatoosh Island and Port Crescent, then transferred to Eureka, Calif., for four months. From December 1907 to September 1910 he served at Mt. Weather, Va., and then transferred to Northfield, Vt. He remained at Northfield until 1916, then moved to New Haven, Conn. From New Haven he was transferred in 1921 to Wilmington in charge, remaining in that post until retirement. He now resides at 202 Brookwood Avenue in that city.

CHECK SHEET IDEA BRINGS AWARD

Dale R. Harris, meteorological aid at WBO Flagstaff, Ariz., has been awarded $15 under the Employee Suggestion Program. Mr. Harris had developed a computation sheet for observational data to facilitate computation work, make checking easier, and reduce errors. Although the form he suggested was not adopted, his idea was used to revise W. B. Form 1081 to include observational as well as 850 mb. pressure data. Use of the form will be optional at field stations.

WILLIFORD ON "VOICE OF AMERICA"

The State Department's "Voice of America" recently called upon C. C. Williford, OIC at Springfield, Mo., to participate in one of its programs. The broadcast, called "Cross Country, USA #10," was beamed to the Far East, Europe, and South America. Highlighting selected aspects of a number of States, the program narrator recalled that Missouri is famous for the saying, "I'm from Missouri -- you have to show me." He then introduced Mr. Williford with the remark, "To the outsider, it might seem that the man who had the hardest time doing that in Missouri would be the weatherman." The broadcast lasted 3 minutes.

Although the program was actually broadcast on September 14, Mr. Williford had transcribed his remarks previously at Radio Station KWTO in Springfield.

CORRECTION

The contraction "ABOB" appearing in line 6, page 493, October 1949 TOPICS, should be changed to, "APOB"; also the word "atmosphere" in line 8, on the same page, should be changed to "atmospherics".

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.

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WEATHER BUREAU

TOPICS

Christmas is here;
Winds whistle shrill,
Icy and chill,
Little care we;
Little we fear
Weather without,
Sheltered about
The mahogany-tree
(THACKERAY)

SEASONS GREETINGS

BEST WISHES TO YOU ALL

F. W. Reichelderfer

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THE CLASSIFICATION ACT OF 1949

During the time the Classification Act of 1949 was under consideration by Congress it was usually referred to as the "pay bill for classified employees." This gave the wrong impression to most Federal employees who found after the bill was enacted that resultant pay increases were not uniform and in many cases quite insignificant. This can best be explained by the fact that the bill was not intended to be a pay increase bill but rather to revise and simplify the entire classification system. This it did by repealing and replacing the Classification Act of 1923, as amended.

The 1949 Act combines the old Professional, Subprofessional, and Clerical-Administrative-Fiscal services into one new "General Schedule" of 18 grades, GS-1 through GS-18. Positions (and consequently the employees working in them) will now be known only by the Civil Service title, "Physicist," "Bacteriologist," "Carpenter," "Meteorologist," "Meteorological Aid," etc. There will be both Meteorological Aids and Meteorologists working at the GS levels of 5 and 7. However, conversion to the Meteorologist classification will depend upon the same factors as heretofore, qualifications, existence of a vacancy, and selection in competition with other qualified candidates.

At the present time neither the Bureau nor the Civil Service Commission has any intention of establishing grade levels of GS-6, GS-8, or GS-10 for work formerly included in the Professional service. The present standard specifications covering the old "P" grades are not exact enough to make such fine distinctions, and until specifications for grades 6, 8, and 10 are published by the Civil Service Commission they will not be used.

Departments and agencies are authorized to approve grades and kinds of positions, and approve appointments to positions in the first 15 grades. Positions in grades GS-16 and GS-17 must be approved by the Civil Service Commission and cannot be filled without prior approval of the Commission. Appointments to positions in grade GS-18 must have the prior approval of the President. Pay schedules showing the new grades and salaries have been made available to all stations and will not be duplicated here. The Crafts, Protective, and Custodial (CPC) service is not included in the General Schedule but retains its previous identity, with slight modifications in salary scales.

The Classification Act of 1949 did not increase the grade of any employee or any group of employees. A place was provided in the new schedule for each existing position, and each employee was transferred to his new grade by placing in his official personnel folder a copy of the new pay schedule with the proper grade and salary rate underlined.

The new Act has no effect on any rights or privileges bestowed upon employees by the previous Classification Act. Waiting periods for within-grade promotions are not affected, promotions as rewards for superior accomplishments are still provided, and other like regulations remain the same. Here, however, comment should be made regarding one provision of special interest to all employees; promotion in grade must be accompanied by a salary increase at least equivalent to a pay step in the grade from which promoted.

A new benefit is provided for employees who have been for some time at the tops of their respective grades. "Longevity increases" are established in the same amount as regular within-grade promotions for the grade. To be eligible for such an increase an employee must have been in the same or equivalent grade for 10 years, 3 of which must have been at the top of the grade. The employee must have an efficiency rating of "Good" or better and his services and conduct must be certified as satisfactory. Three such increases are provided at 3-year intervals in grades GS-1 through GS-10, and in grades CPC-1 through CPC-10. Longevity increases are not provided for grades GS-11 and above.

The Classification Act of 1949 is expected to result in an overall improvement in Government personnel administration although it is yet too early to perceive all the benefits that may emerge from it. The Act delegates further authority and responsibility to the departments and agencies,and it is expected that additional delegation will be made to the Weather Bureau by tne Commerce Department. In a large measure the ultimate result will depend upon how effectively the departments, agencies, and bureaus discharge their new responsibilities.

NEW STATION AT IDAHO FALLS

At the request of the Atomic Energy Commission, a Weather Bureau Office has been established at Idaho Falls, Idaho, to provide assistance in the development of the new nuclear reactor test site being constructed on the Snake River Plains west of that city. Micrometeorological stations will be installed at various spots throughout and surrounding the 600 square mile test site so that a detailed knowledge of the atmospheric flow in this region will be available. Pilot and captive balloon observations will be taken on an irregular basis. Micrometeorological interpretation of certain forecasts may be required in the future. This station will serve the Atomic Energy Commission exclusively, operating on a plan similar to that of the Oak Ridge, Tenn., and Brookhaven National Labratory, N. Y. stations.

Paul A. Humphrey, formerly of the Scientific Services Division of the Central Office and who has been connected with atomic energy research problems for several years, has been selected to head up this new station.

PILOTS COMMENT ON WB AVIATION SERVICE

An article in the April 1949 issue of Air Facts, "The Pilot and the Weather Bureau," by Wolfgang Langewiesche, has aroused wide comment on the author's suggestions for improving Weather Bureau service to aviation. To secure the thinking of Weather Bureau forecasters and others engaged in supplying aviation weather services, an MAL was addressed to a number of stations requesting expressions of opinion on the magazine article and Mr. Langewiesche's ideas. Many diverse thoughts on the subject were of course received, but there was rather general agreement on the need for:

1. Improved and standardized pilot briefing displays for better pilot self-briefing.

2. Expanded and standardized pilot briefing functions making wider use of FAWS personnel and services, and the development and assignment of specially trained briefers at the most active airport stations.

3. Improved aviation weather broadcasts ideally requiring the establishment and scheduled use of government radio channels.

4. An intensified publicity and pilot education program to better acquaint pilots with available services and facilities.

5. Modification of aviation teletype material to make it more directly useful to pilots.

There was general recognition among those questioned that many practical difficulties would have to be overcome in order to implement such a program, including the need for increased personnel and expenditures. However, the suggestions are being given serious consideration for future planning to improve weather services to aviation.

In addition to forwarding his own comments, Claude M. Holmes, OIC at WBAS Des Moines, secured the ideas of a number of private pilots of his acquaintance and has sent them on to us. Some of the more interesting and significant comments are quoted below.

An ex-Chairman of the National Non-Scheduled Airways Advisory Board declares:

My most accurate weather information has come from those local Weather Bureau personnel willing to give me their own frank opinion instead of merely quoting verbatim the latest reports and forecasts from Washington, Kansas City, Chicago, etc.

The present Director of the Iowa Aeronautics Commission also believes that a personal interest in the pilot's specific problem should be more widespread among Weather Bureau personnel.

In most instances, it will be found that the weather man takes a genuine, personal interest in the man he is informing, and this, of course, is very commendable. I have found, however, on a few occasions that some Weather Bureau

offices and some communication stations have taken with a grain of salt, so to speak, pilot reports concerning the weather. I sincerely believe that practices such as this should be discouraged. I am quite convinced that, regardless of the amount of valuable scientific and, of course, intricate equipment that might be located in a Weather Bureau station or communication station, the pilot's report will prove much more valuable to other airmen than any information scientific equipment could give. . . . I believe, too, that when most of our Iowa pilots, farmers, small business men, etc., check the Weather Bureau, they are mainly interested in the opinion of the man they are talking to. I believe that his ideas and his forecasts carry much more weight than those of some forecaster or some man higher up in the Weather Bureau who is located some several hundred miles away.

An Iowa manufacturer who flies his own plane puts the matter this way:

Were I to put my constructive suggestions for making the Weather Bureau more useful to the private pilot in two words they would be, "Improve communications." Not communications within the Weather Bureau, but rather between the Weather Bureau and the pilot. . . . The trouble is, as Langewiesche points out, that the flyer can't always find out what you know. And what you know is relatively useless information unless it is effectively communicated to the pilot. One gets the impression that about 95% of the energy in your vast organization is expended in collecting and disseminating information within the organization and about 5% is used to get that information in the hands of the ulimate user.

A photographer and pilot for a Des Moines newspaper presents his problem thus:

When I am in the air under border-line conditions and such conditions can develop unexpectedly at any time, it does me no good to know what some forecaster decided the weather should be. I want a complete working knowledge of all the alternatives. . . . The only person I would trust to give me the complete weather picture with all its variables is a trained meteorologist who understands my problems. . . . I must talk to this man personally before I am satisfied I can make a flight. . . . The written word, no matter how complete, cannot be as satisfactory as a personal discussion with the meteorologist.

BERNARD COMMITTEE PUBLISHES BOOK

The Hydrology Committee of the American Society of Civil Engineers, of which Merrill Bernard, C&HS Division chief, is Chairman, has recently published a Hydrology Handbook on the principles and practices of hydrology. The project was begun in January 1945.

SCHEDULING FOR LUNCH TIME

The question of how lunch periods should be scheduled arises from time to time at field stations. It is Bureau policy that when an employee is scheduled for 8 consecutive hours of duty, he is expected to be available for work during the whole of this period. He is permitted, however, to eat lunch during this time if he remains available for duty while doing so. Where dual coverage makes it possible for an employee to leave the station for lunch, it is necessary that he be scheduled for a total of 8½ hours, with ½ hour off for lunch. Any similar arrangements which conform to this policy are permissible.

DR. W. J. HUMPHREYS DIES

Dr. W. J. Humphreys, one of the Weather Bureau's most distinguished "alumni," died November 10 in Washington, D. C. He was 87 years of age and had been ill for two months. He was buried at Charlottesville, Va.

Dr. Humphreys retired from active duty with the Bureau in 1935, and for an account of his life up to that time we are reprinting the article concerning him which appeared in the December 1935 TOPICS.

Dr. William J. Humphreys retired from active service as meteorological physicist at the termination of December 31, 1935, but, through a special type of appointment, continues his association with the Weather Bureau as collaborator, without compensation. This is an arrangement that is mutually pleasing and profitable to Dr. Humphreys and to the Weather Bureau.

Dr. Humphreys was born at Gap Mills, Monroe County, W. Va., on February 3, 1862. He entered the Weather Bureau July 1, 1905, as a meteorological physicist; from July 1, 1905, to June 30, 1908, he was supervising director of the Mount Weather (Va.) Observatory, and after that date served continuously at the Central Office in Washington. During the last 4 years he has been Editor of the Monthly Weather Review, in addition to carrying on his other work.

Dr. Humphreys obtained his training in physics at Washington and Lee University, the University of Virginia, and the Johns Hopkins University; at this last institution he studied under the eminent physicist, H. A. Rowland and received the Ph. D. degree in 1897.

At the time he entered the Weather Bureau, Dr. Humphreys had already completed a number of important physical researches, especially in the field of spectroscopy, the most notable of which was his investigation of the pressure shifts of spectrum lines. With a training in physics that was exceptional among meteorologists, he was able to make numerous contributions that materially advanced our understanding of atmospheric phenomena. Particularly noteworthy was his success in finding, in 1909, the explanation of the existence and the principal characteristics of the stratosphere. A long list of papers, and several books, have come from his pen, and have established for him an international reputation. One of his most valuable services to meteorology was the publication of his unique treatise on the "Physics of the Air."

Dr. Humphreys is a member of the American Physical Society, American Association for the Advancement of Science, American Geophysical Union, American Meteorological Society, Optical Society of America, American Astronomical Society, Seismological Society of America, American Mathematical Society, Philosophical Society of Washington, Franklin Institute, American Academy of Arts and Sciences, and corresponding member of the Meteorological Society of Hungary. He has held numerous offices in many of these organizations and has been president of several of them.

A description of Dr. Humphrey's activities since retirement, in his own words, will be found on page 464 of the September 1949 TOPICS.

NICOLSON IN CHARGE AT DULUTH

Kenneth A. Nicolson has been placed in charge at WBO Duluth, replacing Harry G. Carter who retired September 30. Born and reared in North Dakota, Mr. Nicolson graduated from the University of North Dakota in 1923. Until 1939 he taught science in the public schools in North Dakota, and also held various administrative posts in the school system. His first position with the

Weather Bureau was as junior observer at WBAS Bismarck in 1939. The following year he was transferred to Winnemucca, Nev., and in 1942 to Reno. In 1944 he was sent to Salt Lake City. He remained at Salt Lake City until 1947 when he took leave without pay to accept a position with the Irish Meteorological Service at Shannon Airport. Returning to the United States in June 1949, he was assigned temporarily to the Washington National Airport until his selection for the Duluth post.

The Duluth station, which has recently been consolidated at the airport, provides localized forecasts and warnings, and prepares and disseminates small-craft and storm warnings for a storm warning district at the west end of Lake Superior. Among the interests served by the station in addition to aviation are truck gardeners, greenhouse operators, florists, and farmers; railroads, bus and truck lines, city transit, and ore, freight and passenger steamers; gas, water, electric, and telephone companies, and a steam heating corporation; architects and contractors, dry docks, boat building firms, skiing, stream and lake fishing, hunting, coasting, tourists and hay-fever patients; also fire, police, and highway departments, U. S. Coast Guard, harbor tugs, schools, manufacturing and processing plants, retail stores, wholesale firms and distributors and the general public.

"WEATHERBALL" TELLS FORECAST

Minneapolis citizens can get a brief summary of the next day's weather forecast any evening just by stepping outside and looking toward the center of the city, reports M. R. Hovde, OIC at WBO Minneapolis. Atop a tower on the roof of one of the local banks, 367 feet above the street, is a 10-foot lighted "Weatherball" which indicates by its color the official weather forecast for the following day. Covered with plastic, the "Weatherball" is lighted by neon tubes inside. If the ball glows red, the forecast is "warmer;" white, "colder;" green, "no change." If the light is blinking, watchers know precipitation is due, although there is no way of indicating the kind to be expected. The facilities are provided by the bank on top of which the "Weatherball" stands.

DALLAS-FORT WORTH FILL CHEST

Weather Bureau employees in the Dallas-Fort Worth area convincingly demonstrated their public spirit in the recent Community Chest drive. Captained by Chief Field Aide M. C. Harrison of the Fort Worth Regional Office, they made an all-out effort to achieve maximum participation in the drive. Final results showed WBO Dallas with 100 percent participation and a full quota; offices in the Fort Worth area (WBRO, WBAS, WRPC) achieved 100 percent participation and exceeded their quota by 50 percent.

IMPROVED SERVICE FOR "HIGH PLAINS"

To provide more detailed local forecasts and improved warning service for the "High Plains" area of northwest Kansas, and to test the feasibility of local station service for an area greater than the usual city and vicinity, a special project has been established at Goodland, Kansas.

Until this year a station with an all subprofessional staff, Goodland personnel now include two professionals and six subprofessionals. A program previously limited almost entirely to observations has now been expanded to include forecast and warning service for a designated area of 20 counties in northwest Kansas. The official in charge at Goodland has been given authority to issue forecasts and warnings for northwest Kansas which may differ from the State forecasts issued by the district forecast center, as and when his knowledge of local conditions calls for such action. This action is taken after consultation with the forecast center unless the urgency of a situation does not allow time for such coordination.

John W. Hamilton, who returned to the Bureau last summer after more than a year's duty with the Meteorological Branch of OMGUS in Germany, was chosen to head the project. Born in Plainview, Texas, he is a graduate of Trinity University, Waxahatchie, Texas. From 1930 to 1940 he taught science in the Waxahatchie high school and entered the Weather Bureau as a junior observer at Dallas in April 1940. He was the recipient of a Weather Bureau scholarship at the University of Chicago in 1942 and then served at WBAS Fort Worth until January 1948 when he transferred to the Department of the Army for work in Germany.

SCOTTSBLUFF GETS NEW STATION

A new Weather Bureau Office at Scottsbluff, Nebr., patterned after the earlier established project at Goodland, Kans., went into limited operation in November, In addition to the usual responsibility for local service for Scottsbluff and vicinity, the station issues forecasts and warnings for 11 counties of northwest Nebraska, based on the state and airway forecasts from the district forecast center and the prognoses from the WBAN Analysis Center. The OIC at Scottsbluff has final responsibility for the forecasts issued, but is expected, when time permits, to coordinate differences with the district forecast center.

Edgar L. Van Tassel, former field aide at the Kansas City Regional Office, was chosen to head the new station. A Kansan by birth (1907) Mr. Van Tassel attended Kansas State Teachers College at Pittsburg, majoring in the physical sciences, and secured his M. S. degree in 1935. From 1928 to 1937 he taught in Kansas public schools, and served as a superintendent of

schools for the last five years of that period. The following year he taught shop courses, then performed laboratory research for an oil company for a year. He joined the Weather Bureau as a junior observer at Abilene, Tex., in 1939. After a year there he was transferred to Greensboro, N. C. In 1940 he was transferred to Kansas City, and became a field aide when the Regional Office was organized. In 1948 he won a $25 suggestion for an idea for improving the on-station punching WBAN cards.

TECHNICAL PUBLICATIONS DISTRIBUTED

The following publications and reprints were distributed to forecast offices during the period August through October:

Final Report on an Objective Rainfall Forecasting Method for the Los Angeles Area, J. K. Angell and C. K. Chen, Department of Meteorology, University of California, February 1949.

"Artificial Production of Precipitation, Third Partial Report: Orographic Stratiform Clouds - California, 1949; Fourth Partial Report: Cumuliform Clouds - Gulf States, 1949", R. D. Coons, E. L. Jones, and Ross Gunn, Research Paper No. 33, USWB Washington 1949.

"Air Pollution in Donora, Pa.", Public Health Bulletin No. 306, Public Health Service, Washington 1949.

"Weekly Mean Values of Daily Total Solar and Sky Radiation", I. F. Hand, Technical Paper No. 11, USWB, Washington 1949.

"The Unusual Weather and Circulation of the 1948-49 Winter," Wm. H. Klein, reprinted from Monthly Weather Review, vol. 77, No. 4, April 1949. "Estimating the Probability of a Large Fall in Temperature at Washington, D. C.", W. W. Dickey, reprinted from Monthly Weather Review, vol. 77, No. 3, March 1949.

"An Objective Method of Forecasting Winter Rain for Portland, Oregon", R. Corday Counts, and "Additional Tests of Counts' Objective Method o Forecasting Winter Rain for Portland, Oregon", T. E. Jermin, reprinted from Monthly Weather Review, vol. 77, No. 5, May 1949.

FOLKLORE OF THE "BIG MAN"

From an article, "Principles or Factors in Organization," by Henry E. Niles, in Dr. Catheryn Seckler-Hudson's book, Processes of Organization and Management, we bring you the "folklore of the big man:"

If you keep lots of people waiting in your anteroom —

If you have a lot of people reporting directly to you —

If you make yourself indispensable by refusing to pass on your knowledge to others —

If you do more detail work than anyone under you —

If you show the other fellow how wrong he is —

If you stick your fingers into other people's pies —

If you sign or initial a lot of papers —

If you make a big fuss over little things to show you are perfect and expect perfection in others —

If you do these things, You Are a Big Man -- In Your Own Eyes!

WEATHER FOR JET AIRCRAFT

At the Fall 1949 meeting in Washington, D. C., of the Radio Technical Commission for Aeronautics (an advisory group of Government and industry representatives which makes broad studies of aviation communications problems), one highlight was the discussion of traffic control problems posed by jet-powered aircraft. These problems have important implications for Weather Bureau service to aviation.

Because of extremely high fuel consumption at lower levels of the atmosphere, jet engines can perform at maximum efficiency only at very high altitudes. A jet plane can climb to 40,000 feet and fly 2,400 miles on the same fuel required to climb to 10,000 feet and fly 900 miles.

Ground handling of jet planes must be brief, for 10 minutes of taxiing requires the same amount of fuel as a flight of 80 miles at 10,000 feet or 290 miles at 40,000 feet. The aircraft must therefore have complete ATC clearance before the engines are started, including the landing sequence at the destination. A "jet" descending from 40,000 feet at the rate of 3,000 feet per minute would have to start its approach approximately 110 miles from its destination, compared to 60 miles for a DC-6 from 15,000 feet and 25 miles for a DC-3 from 5,000 feet. Because of the high fuel consumption at lower altitudes, there is no turning back once the jet starts its descent, so unplanned traffic delays at the destination are serious.

Such high altitude operations as those of jet aircraft, and the rapid development of electronic aids to air navigation, pose challenging problems for the Weather Bureau. There are clear indications that the future of aviation meteorology will depend on our ability to forecast winds aloft, high level temperatures, terminal ceilings and visibilities, etc. with more dependability than is possible with present tools and practices. To this end, the Bureau will shortly have under way a full-time research project for improving aviation forecasts, but if we are to keep abreast of developments in aviation the concerted efforts of everyone concerned will be necessary in providing accurate observations and forecasts.

A QUOTABLE QUOTE

From Weather, the bulletin of the Royal Meteorological Society (England), has been gleaned this concise comment on the progress of forecasting:

Progress in forecasting tends to be slow, each small advance following the introduction of improved networks of observing stations, better communications, new instrumental aids or the application of new theory. Better routine forecasting techniques can only be developed as these improvements are digested, and so far nobody has discovered a pill to speed up the process.

SIMMERMACHER OIC AT SCRANTON

Richard E. Simmermacher, formerly principal assistant at Allentown, Pa., has been named OIC at WBO Scranton, replacing Ralph C. West who retired September 30. Mr. Simmermacher is a native of Ohio; he was born in Willard, Ohio, in 1910 and attended Otterbein College at Watertown. After receiving his B S. degree in 1932 he managed, and then owned, an automobile service station until 1935. From 1935 to 1939 he taught science in the Lexington, Ohio, high school and then became a junior observer at WBO Akron. In 1940 he was placed in charge at Eastport, Me. For several months in 1943 he was OIC at Mt. Pocono, Pa., and was then transferred to Allentown.

Scranton a city of about 140,000 population, is primarily a coal mining and transportation center. During the winter warnings of heavy snow, icy roads, and cold waves are furnished the large transportation industry in the area. As the country is mountainous the condition of highways and streets is of great importance because of the heavily loaded trucks and buses traveling the steep grades. The city is also headquarters for the power company furnishing power and light throughout Lackawanna and Wyoming Valleys; thunderstorms and icing conditions are of most interest to this concern. Fruit shippers and the general public are also served by the WBO.

MT. BALDY TRIP HAZARDOUS

The difficult semi-annual task of servicing the storage gage atop Mt. Baldy in eastern Arizona was once again accomplished in October, reports Louis R. Jurwitz, OIC at WBO Phoenix. Accompanied by Mr. B. Goodwin of the Salt River Valley Water Users' Association, Mr. Jurwitz left Phoenix early on the morning of October 19. A cold low had formed aloft during the previous 12 hours, and the trip into the White Mountains was made through rain, sleet, and finally snow to a depth of 6 to 8 inches on the road. High winds drifted the snow at times so that the road was obscured. At one time the pickup truck stuck in deep snow, slid off the road, and was extricated only by chopping down several trees and driving the truck down a draw.

On the 20th, the weather cleared partially, and the party started up Mt. Baldy on horseback. At the 10,000-foot level the snow was 3 feet deep, and at 11,000 feet the horses floundered in snow up to 5 feet deep. Drifts up to 40 feet in depth were observed on the lee side of cliffs on top of the mountain. One of the men was unhorsed, but the snow saved him from injury.

The gage was read and recharged, and the descent was made without further incident, although visibility on the return trip was impaired by snow which began to fall before the gage was serviced.

EXHIBIT SUCCESS AT ATLANTIC CITY

A Weather Bureau exhibit in the main lobby of the Central Pier at Atlantic City, N. J., from July 26 to October 2 was "a tremendous success," according to Department of Commerce officials and others who watched boardwalk crowds examining it.

The display, part of a larger Department of Commerce exhibit which also included the Bureau of Standards, consisted of two panels covered with photographs showing Weather Bureau activities, two glass cases filled with weather instruments, and a number of other items of Weather Bureau equipment placed nearby. It was prepared by the Central Office Daily Map Unit and assembled by Charles O. Schick of the Central Office and Charles L. Dannheiser of the New York Regional Office. Publicity was given the exhibit beforehand by Samuel Deitch, OIC at WBO Atlantic City, on his daily weather broadcast.

The larger of the two panels carried photographs showing how the Bureau collects, processes, and disseminates information. Sources of information pictured included international exchanges. river gage observers, ships at sea, Weather Bureau Offices, etc. A typical forecast center was shown, picturing use of surface maps and upper air charts, preparation of forecasts, warnings and advisories, as well as dissemination of information through public channels. Also included were the activities of the fire weather and frost warning services, with a sample fire danger indicator, a mobile weather unit, farm land before and after a freeze, and a heated orange grove in color.

The small panel, opposite the larger one, illustrated the hydrologic services of the Bureau, particularly the river and flood forecasting service. In addition to pictures it carried two large maps in color, one showing the river districts of the United States, and the other a blow-up of the Ohio River Valley States.

Atop the main panel were exposed an anemometer, radar equipment, and a wind vane. Two large display cases in the center of the lobby contained such instruments as mercurial barometer, radiosonde, hygrothermograph, triple register, pyrheliometer, etc. Flanking the ends of the display were a radiosonde receiver and a pyrheliometer integrator.

More than 1,000,000 people viewed the exhibit, it was estimated by Louis St. Johns, manager of the Central Pier Company.

TWO NEW HAWAIIAN STATIONS

Two new first-order stations in the Territory of Hawaii, authorized by Congress for establishmnet during this fiscal year, began limited operation November 7 with pilot balloon observations twice a day. One station is located at Hilo on the Island of Hawaii; the other will be at Lihue on Kauai, but the observa-

tions are being made temporarily at the CAA quarters at Port Allen until the new Weather Bureau quarters at Lihue Airfield are finished.

Eventually, both stations will take rawinsonde observations, and will maintain complete surface observational programs. Considerable construction work is necessary before the authorized programs can be fully implemented, but this work is proceeding satisfactorily. The programs will be expanded as personnel and facilities become available, and should be completely implemented, including public and aviation service, by March 1950.

James W. Steiner, a former "Hypo" employee assigned to Midway Island, will be official in charge at Hilo. Following the end of the Hypo program, Mr. Steiner was assigned to WBAS San Francisco until the present assignment. Niilo E. Koski has been selected as OIC at Lihue. Mr. Koski entered the Bureau in 1941 as an observer at Fairbanks, Alaska, and then in 1945 became an electronics technician in the Seattle Regional Office. From July 1948 to the time of selection for the present position he was administrative officer at Thule, Greenland. Other personnel for the two stations are yet to be selected.

INDIANAPOLIS CUTS TELEPHONE WORK

The city of Indianapolis does not have automatic telephone weather service such as is installed in Washington New York, and several other cities. But WBO Indianapolis, reports OIC Paul A. Miller, has found a way of providing maximum information to the public with a minimum telephone work load on Weather Bureau people.

When calls to the City Office began mounting up last summer, the switchboard operators in the Federal Building found it difficult to reach the Weather Bureau through the single telephone line available for public use. The chief switchboard operator therefore suggested that since relaying calls to the Bureau line meant an extra operation on the board, it would be as easy for the operators to give out a standard weather forecast themselves as to hold the call until the Bureau line was free. This would prevent Weather Bureau calls from unduly tying up too many of the 50 lines entering the Federal Building. The operators were therefore provided with the temperature and latest local forecast to give out to the public when calls were received. The plan has since worked well and does not interfere with calls from newspapers, radio stations, and other agencies requiring more extensive information, as they call on an unlisted number. During hours when the City Office is closed, the weather information is supplied the operators in the Federal Building by the Airport Station.

"ROUNDING RULE" GIVES WAY TO PROGRESS

Most observing and computing procedures in use by our national weather service 70 years ago have long since been changed or forgotten. One of the few, or perhaps the only one, to survive until the present has been the "rounding rule," or rule for disposal of decimals, adopted in 1881. So closely have observers associated with the Bureau the practice of converting decimals to the nearest whole number and .5 to the even number that they have long referred to it as "the Weather Bureau rounding rule," although it is commonly used and did not originate with the Bureau.

But even our old rounding rule has finally had to give way to modernization -- not because it is no longer in vogue or no longer valid -- but because new uses for data and improved procedures of statistical computation have been introduced. For a long time there have been complaints about the excess of even numbers introduced by the old rule. While our old rule left the means unbiased, it affected the increasingly important frequency distribution. Moreover, the tabulating and computing machines now in use cannot apply the old rule, and some published averages and totals computed by hand were slightly different from other values computed by machine card methods. The public was asking about these discrepancies, which were difficult to explain, so a new rounding rule has been adopted for all Weather Bureau computations.

The new rule applies only to the disposition of decimals and not to methods of observation; readings will still be made to the nearest .1 degree. Decimals are now rounded as follows:

1. If the decimal to be disposed of is a five or greater, the preceding digit is increased by one.

2. If the decimal to be disposed of is less than five, the preceding digit remains unchanged.

3. Algebraic signs are disregarded, e.g., 1.5 becomes 2 and -1.5 becomes -2.

The new rule is simpler to apply and easier to teach to new observers. It produces unbiased frequencies because the probability of even and odd numbers is identical in the last retained decimal place. Although the rule biases means and totals slightly, this bias is almost always much smaller than the random error and therefore is not important.

FROST FOR HESS AT WILMINGTON

Reuben L. Frost, OIC at Key West since 1946, has replaced Paul Hess, who retired October 31, as OIC at Wilmington, N. C. Mr. Frost was born in Edmond, Okla., in 1896, attended Oklahoma A & M College, and received a B. S. degree in Horticulture in 1921. From 1921 to 1925 he taught vocational argiculture in the

Philippine Islands, and from 1925 to 1929 taught the same subjects in the U. S. Indian Service at Training Schools in Idaho, Nevada, and Oregon. He was interested in meteorology even then, serving as a cooperative observer at Owyhee, Nev., in 1926-1927. Mr. Frost then joined the Weather Bureau as a junior observer at WBAS Portland, Oreg., in 1929. In May 1932 he was transferred to WBO Fairbanks, Alaska, as first assistant, and served there as OIC from 1934 to 1938. Upon his return to the United States in 1938 he was placed in charge at WBAS Richmond, Va. In 1942 he was called to active duty with the Navy and remained in the armed service until 1946. When he was released from the Navy he was again placed in charge of WBAS Richmond but was soon transferred to Key West.

During his career Mr. Frost has traveled much, having visited Japan, Dutch East Indies, Indo-China, the Malay States, several countries in the Mediterranean area, the Canary Islands, and the West Indies, in addition to the Philippines and Alaska. He has written several articles for the Monthly Weather Review and the AMS Bulletin, and has won numerous prizes with his photography.

The Wilmington office serves farming and trucking interests within a radius of 75 miles. Marine and shipping interests at the ports of Wilmington, Southport, Morehead City, Beaufort, and New Bern depend upon forecasts and warnings from the station. Warehouses and similar interests receive freezing temperature forecasts for protection of sprinkler systems and plumbing. Resorts at Wrightsville, Carolina, Kure and other beaches make extensive use of forecasts. In addition, pilots, railroads, motorists, the U. S. Engineers, and the general public are served by the office, which has especially important responsibilities when hurricanes threaten the Carolina coast.

COURTESY IN PUBLIC RELATIONS

In our April issue we carried an article (page 382) pointing out how the public appreciates competent and courteous service. Further point is added to this article by V. E. Jakl who comments thus:

We here want to add a little more emphasis on the word "courteous" in the cited article. Courtesy in both the personal and telephonic conversation betokens a certain element of competence. He or she who gives a friendly greeting, and indicates by every gesture and tone a willingness to give the best information and interpretation available or possible, has already gained the confidence of the caller. Such confidence pays dividends in the form of commendation for helpful advice, or at least forgiveness for those inevitable minor percentages of failures.

F. W. Reichelderfer

F. W. REICHELDERFER

Chief of Bureau.