WOMEN IN THE WEATHER BUREAU DU
WORLD WAR II

Edited by

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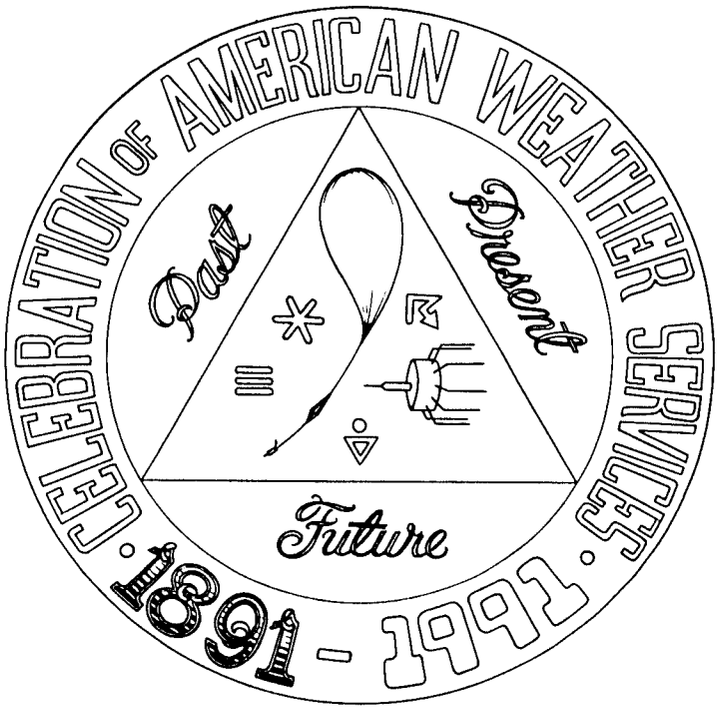

In Support of
The Celebration of American Weather Services
...Past, Present, and Future

FOREWORD

In 1941, the United States entered a World War that would significantly alter the future of this country. At that time, the economy was beginning to emerge from a deep depression, and the isolationist point-of-view was disappearing.

At the family level, the man was viewed as the "bread winner," and women cared for the home and looked after the children. Overnight, this "typical family" concept was changed as men went to war and women accepted war-production jobs.

In 1941, the Weather Bureau was beginning to make technological and scientific advances. Both the teletype and radiosonde were still relatively new to the Bureau (less than 10 years had elapsed since their implementation), and research was being conducted into the coupling of upper-air atmospheric conditions to surface weather patterns.

By today's standards, the weather office of the early 1940s was Spartan, containing a few desks, thermometers, barometers, a teletype, and light tables. Also during this time, office staffs were comprised entirely of men. In 1941, only two women were listed in the observer and forecaster ranks of the Weather Bureau.

This staffing ratio was changed dramatically during World War II. By 1945 over 900 women were working as Weather Bureau observers and forecasters, and many offices were comprised almost entirely of women. As with other parts of the U.S. war society, women stepped into Weather Bureau offices and showed they could perform observing and forecasting duties as well as, if not better than, men.

Despite exhaustive literature searches (manual and computerized) of the NOAA library, Library of Congress, and university libraries, no documentation could be found on the many contributions women made to the Weather Bureau during World War II. Since many of those women are now in their 60s, 70s, or 80s, it is appropriate that they be formally recognized for their devotion during the National Weather Service Centennial Celebration.

This publication documents the experiences and impressions of women who worked for the Weather Bureau during World War II. As one reads through these narratives, certain underpinnings become clear. It is obvious all these women possess a "can-do" attitude. They were enthusiastic workers in the Weather Bureau and remained active after leaving government service. They also were extremely dedicated; many indicated their proudest accomplishments were associated with taking perfect observations, making good radio (live) broadcasts, performing quality pilot briefings, etc.

To many, the Weather Bureau was a positive experience. They indicated they generally were well treated by management and accepted by other workers. The term "Weather Bureau Family" appears several times in the document. For a few, observing and forecasting the weather was considerably more exciting than other jobs, and a sense existed of contributing to the war effort.

For the most part, women in this document were in their early 20s when they entered the Weather Bureau. Education varied from high school to college, and most had limited work experience of any type, although a few had been teachers.

During World War II, most women entered the Weather Bureau as Junior Observers, although some later became forecasters. On-the-job training was provided by the Weather Bureau initially; however, training courses lasting two months eventually were established at several Regional Offices.

Only a small fraction of the women who worked in the Weather Bureau during World War II are mentioned in this document, but it should provide an indication of conditions during the 1940s. The first part of this publication presents an overview of the war years as women entered the work force in large numbers, as well as basic information about the Weather Bureau. The second and more important part is comprised of individual stories from the women themselves.

Almost 50 years have elapsed since the beginning of World War II. Although this publication is only a sketch of the many contributions made by Weather Bureau women during the war, it is an attempt to recognize the hard work, commitment, and devotion of these individuals. In short, it is a token of the sincere appreciation offered by a grateful agency.

Dr. Elbert W. Friday
Assistant Administrator
for Weather Services

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Many people made this document possible. They helped locate persons who were employed by the Weather Bureau during World War II, and in some cases, have assisted with the interviews. We extend our thanks to them for the much appreciated help.

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Our apologies if we have omitted the names of anyone who provided help.

PREFACE

It has been thoroughly enjoyable for those of us who have worked on this project. The stories, photographs, and memorabilia we received from the women who worked in the Weather Bureau during World War II stirred many emotions. They were heartwarming, enlightening, entertaining, and educational. We sense a closeness to those who responded and admire each one.

Our original objective was to try and find ten women to interview. We did have some telephone conversations, but mostly gathered information through the mail. The response we received was overwhelming. Through a chain reaction, we were able to send correspondence to nearly 70 people; approximately one-half (34) responded.

The primary focus of this project was to document the experiences of women in the Weather Bureau during World War II. A few responses were received from women who worked immediately after the war, and those have been included since they are representative of the times. Most photographs in this document were provided by the women themselves; however, a few were obtained from the National Archives.

From the personal perspective of the principal author, when reading the narratives of the women in this document, I kept reflecting on things my mother told me about when I was growing up. She also had the same "hard working ethic" as the women in these stories and was of the same era. She worked, but no, not for the Weather Bureau. In many cases, I even related some of my own experiences with those of these women. I thank each of you for sharing part of your life.

As you read each narrative, we hope you will also feel a kinship to these people, as did those of us working on the project. Although the narratives follow the same general format, we have done only minor editing to improve clarity. Editorial comments within the text are indicated by brackets. The restriction on alterations was done because we wanted each individual personality to be reflected in this final preserved document of Weather Bureau history.

Kaye O'Brien
Gary K. Grice


WE'RE AT
WAR!
LET'S WIN IT!
LABOR-MANAGEMENT WAR PRODUCTION DRIVE COMMITTEE


Women
in the war
WE CAN'T WIN
WITHOUT THEM

Overview

Based on available literature, the rights of women in the United States advanced considerably between the two world wars. Their participation in World War II was more extensive than during the First World War although their contribution should not be belittled during the latter.

During World War I, women's contributions were mainly in the area of conserving food, raising gardens, knitting clothes for the armies, serving as nurses, and participating as volunteers during such events as raising money for the war. During World War II, the demand was for women in the work place.

During the First World War, the emphasis for women to join the work force was not as pronounced as during World War II. In 1917, Woodrow Wilson stated, "Every housewife who practices strict economy puts herself in the ranks of those who serve the nation." That same year, the Secretary of Agriculture stated, "Every woman can render important service to the Nation in its present emergency. She need not leave her home or abandon her home duties to help the armed forces. She can help to feed and clothe our armies and help to supply food to those beyond the seas by practicing effective thrift in her own household."

The Great Depression cast a long shadow over the decade of the 1940s. When the economy hit its low point in 1933, the gross national product had plunged from $149.3 to $107.6 billion; national income stood at one-half its 1929 level; and more than 30 percent of the work force--12 million men and women could not find jobs.

On the eve of World War II, the country was still recovering from the Great Depression. Unemployment rates, though reduced, remained high and working married women were not acceptable. In fact, on December 8, 1941, the lives of most women closely resembled those of their mothers.

In 1941, one-third of all households were still cooking with wood or coal; and water often had to be carried from an outside source. Even though bed sheets were changed less frequently than now, laundering them was a backbreaking task for that half of the female population who scrubbed the laundry by hand or used a hand-cranked washing machine. Both farm and city women spent over 50 hours a week in household responsibilities.

Over one-half of the population still lived in rural areas or in towns of under 50 thousand where traditional values prevailed. The family concept dominated and was idealized in the mass media. Under this concept, the role of the husband was to provide for the family, and the role of the wife was to provide a suitable home. The place for the wife was at home.

During the 1930s, as the effects of the Great Depression deepened, it was basic economic need that drew married women into employment outside the home. By the end of the decade, almost 15.5 percent of all married women were gainfully employed. The husbands of over one-third of these women made less than $600 annually, barely half the median income in 1939. The majority of these working wives of the poor were not likely to earn more than $200, but their economic contribution often provided something as basic as a roof over their head or enough food for their children to eat.

Most wage-earning wives did not have the luxury of choosing to work or not. Nevertheless, public opinion was against them. In 1936, 82 percent of the population felt that wives should not work if their husbands had jobs. Furthermore, a majority believed that laws should be passed to prohibit wives from working. These restrictive laws were never enacted, but the federal government did prohibit a married couple from both holding government jobs, and as late as 1939, legislatures in 26 states considered laws limiting married women's work. Both men and women believed that married women should give up their jobs if their husbands wanted them to.

In the Depression decade, those wives who worked outside the home were viewed as selfish, greedy women who took jobs away from male breadwinners. A Gallup poll in 1936 reported that 82 percent of the respondents believed that wives with employed husbands should not work outside the home, and three-fourths of the women polled agreed.

When the United States entered World War II, the country had to move quickly into high gear. Almost overnight, auto factories were converted into aircraft plants, shipyards were expanded, and new factories were built. In order to quickly fill the demands for workers in these new or expanding industries, complex jobs that formerly had been performed by highly skilled workers, like machinists, were broken down into smaller tasks that could be quickly learned.

The promise of new, well-paying jobs attracted not only the urban unemployed, but also people from rural areas and small towns. The mass migration from the South, the Southwest, and the Midwest into the industrial centers of the West and North would have an important and lasting affect on the nature of American society.

Recruitment campaigns directed at women played upon their patriotism. The messages appealed to their domestic and nurturing roles. Self-sacrifice was required to bring their loved ones home safely and to preserve the way of life they cherished. The temporary nature of this required shift in roles was stressed.

Novel approaches were developed to get the message across. The Womanpower Commission in Buffalo, New York, set up Cape Cod cottages downtown in order to welcome potential applicants. In Los Angeles, married Lockheed women workers served as "Victory Visitors" going from door to door in their neighborhood to recruit full-time homemakers for the factories.

As the federal budget grew to $100 billion in 1945, new means were devised to procure revenue. Deficit financing provided about one-half the war costs as the national debt rose from $43 billion in 1941 to nearly $260 billion in 1945. While the government continued to borrow money by selling securities to Federal Reserve Banks, it also launched massive campaigns to sell war bonds in low denominations and got 25 million workers to purchase $25 bonds through payroll savings plans. Increased taxes provided the remaining half of the Treasury's needs. New legislation increased corporate taxes, raised the excess-profits tax to 90 percent, initiated the income-tax withholding system, and broadened the tax base. The

number of Americans who paid federal income taxes rose from about 7 million in 1940 to more than 42 million in 1945.

Higher taxes and the encouragement of savings through war bonds were not sufficient to limit the inflation which resulted from increasing consumer purchasing power chasing a limited supply of goods. The government succeeded in curtailing the rise in prices to 29 percent between 1939 and 1945.

The labor force expanded from 56,180,000 in 1940 to 65,290,000 in 1945. Workers saw their average yearly real earnings rise from $754 in 1940 to $1,289 in 1944. The increase resulted not simply from increased rates of pay, but also from overtime work and expanded employment in already high-paying jobs.

The Census Bureau estimated that 15.3 million people moved during the war, half of those having crossed state lines. Some of the migration consisted of servicemen's families moving to military base areas, but most of it resulted from the lure of higher paying jobs.

Between 1940 and 1945, the female labor force grew by more than 50 percent, as the number of women at work outside the home jumped from 11,970,000 (with an additional 2.19 million unemployed) in 1940 to 18,610,000 (420,000 unemployed) in 1945. The proportion of all women who were employed increased from 27.6 to 37 percent, and by 1945, they formed 36.1 percent of the civilian labor force. Three-fourths of the new female workers were married; by the end of the war, one of every four wives was employed.

The number of women in civil-service jobs jumped from fewer than 200,000 in 1939 to more than 1 million in 1944, a 540 percent increase. Their share of federal positions increased from 18.8 to 37.6 percent. Although clerical work continued to be the typical female job, by 1943 women were being hired as mechanics and press, crane, and tractor operators as well as in professional classifications usually filled by men. During the war, all new civil service appointments were limited to the duration plus six months. Thus, the postwar prospects for these new employees depended upon the degree of contraction of the federal bureaucracy and the extent to which veterans would want civil service jobs.

Since wages in munitions plants and aircraft factories averaged 40 percent higher than those in female fields, the hiring of women in durable goods represented a significant step up the occupational ladder for women workers. In Detroit, a typical war production center, the average weekly take-home earnings of women in war industries were $40.35 whereas those of women in laundries, restaurants, hotels, retail and wholesale trade, and consumer goods industries ranged from $24.10 to $29.75. As a result, massive shifts occurred in the labor force as women abandoned these fields to seek work in war production plants. In the ten major war production areas, 50 percent of all women who had been in trade and personal service and 66 percent of those who had been employed in eating and drinking establishments shifted to war manufacture.

The greatest changes in wartime economic behavior took place among married women. One in every ten married women entered the work force during the war, and they represented more than 3 million of the new female workers, while 2,890,000 were single and the rest widowed or divorced. For the first time in the nation's history there were more married women than single in the female labor force. While housework and voluntary activities continued to occupy the majority of married women, the percentage of all wives who worked outside the home grew from 13.9 in 1940 to 22.5 in 1944.

In Rosie The Riveter Revisited (by Sherna B. Gluck), one of the messages which came to the surface was the women saying, "I never realized what I could do." Many of the women interviewed by Ms. Gluck said that their wartime work experiences changed the way they felt about themselves. Being able "to hold their own with men," gave a new sense of self, of competency, not only to women new to the world of work outside the home; but, also, to those who had worked at traditional women's jobs. During the war, for the first time in their lives, many women performed jobs that were viewed by the public as necessary and valuable.

Women who worked during the war were faced with the double burden of maintaining the home. After 8 to 10 hours on the job, these wives and mothers had to stand in long lines in the stores and cope with rationing. By the time they reached the market at the end of their workday, the limited supplies were depleted unless they were fortunate enough to have a grocer who looked out for them. The shoppers who were lucky enough to have a washing machine still had to contend with the search for laundry soap. Those who used a commercial laundry had to wait as long as two weeks or a month for the return of their clothing and linens.

The war permeated every aspect of daily life. News from overseas was regularly broadcast on the radio. One network devoted almost 40 percent of its broadcast time to news programming about the war. War themes were incorporated into the dramatic and variety shows as well. The popular comedy programs often originated from army bases and joke routines touched on life in the service. Many of the old standbys, like "Fibber McGee and Molly," incorporated war messages into the body of their programs, dealing with issues like the black market and the recruiting of nurses' aides.

Movie attendance was at an all-time high with women the major audience. War themes were regularly served up, but most movies were escapist in nature, especially after 1943. The genre of women's films that had first appeared in the 1930s were still popular, and the strong characters portrayed by Bette Davis, Joan Crawford, and Barbara Stanwyck continued to survive in a male dominated world. They were offset by the emergence of a new model, the "girl next door," as portrayed by actresses like June Allyson. Still, the workwomen were performing during the war was treated seriously.

Some of the shifts in attitudes toward women workers were subtle. Others where shrill. Astute observers understood that women had been changed by the wartime

experience. Harold Ickes, the Secretary of the Interior, noted:

> I think that this is as good as any...to warn men that when the war is over, the going will be a lot tougher, because they will have to be compared with women whose eyes have been opened to their greatest economic potentialities.

The alarm was sounded when the results of Women's Bureau interviews with 13,000 women about their postwar plans were announced. In that survey, it was found that 75 percent of working women wanted to continue to work after the war. It was not just those women who had worked before the war who planned to continue, but over one-half of the former homemakers announced the same intention. Furthermore, most women who planned to continue wanted to keep the jobs they had.

After the war, both marriage and birthrates soared. From the middepression low of 18.7 births per 1,000 population, the rate increased to 24.5 by 1949, or about the same as it had been in 1925. Marriage was in vogue. It is true that the divorce rate had climbed during the war, but by the late 1940s, it had dropped. In any event, the institution of marriage was not threatened. Most divorced men and women were quick to remarry. Home ownership grew, spurred on by the availability of GI loans and the savings that had been accumulated during the war. By the end of the decade, the United States had become more urbanized and suburbanized; war-related benefits like the GI bill altered the social class structure; and the population, generally, enjoyed a higher standard of living.

Many women proudly proclaimed how they had "held their own with men." In retrospect, this is probably what laid the groundwork for the transformation of some with timid personalities to selfconfident participants in the wider world. Most women who participated in the labor force during World War II were significantly affected by the chance to prove their competence in the male world.

The predominant media portrayal of women war workers was that they were young, white, and middle-class; furthermore, that they entered the labor force out of patriotic motives and eagerly left to start families and resume full-time home making. As historians have studied the war period, it has become clear that this image is almost completely false. Contrary to popular belief, the women who entered war production were not primarily middle-class housewives but working-class wives, widows, divorcees, and students who needed the money to achieve a reasonable standard of living. Most of them had prewar experience in the labor force. A Women's Bureau survey of ten war production areas analyzed the work histories of employed women in 1944 and discovered that only 25 percent had less than two years' work experience. Almost half had been in the labor force at least five years and almost 30 percent at least ten.

By 1946, the female labor force had declined from its wartime peak of 19,170,000 to 16,896,000. Women's share of the civilian labor force decreased from 35.4 percent in 1944 to 28.6 percent in 1947, and the proportion of all women in the job market fell from 36.5 percent to 30.8 percent. Even at their low point, however, these figures were higher than those for 1940, and by 1947 they had begun to climb again as the long-term trend in female employment reasserted itself.

Despite some ineffectual protests from laid-off workers, women found themselves at the end of the war in nearly the same discriminatory situation they had faced prior to Pearl Harbor. While 45.3 percent of women production workers had been employed in higher-paying durable goods industries in November 1943, only 25 percent of these workers were in such jobs by November 1946. There was a net drop of 500,000 women in "craftsmen and foremen" positions after VJ Day, and the percentage of women in service work increased.

Fictional characters in magazines frequently were utilized to advance government goals such as buying war bonds, conserving scarce resources, planting victory gardens, and in general, maintaining a stoic, optimistic, patriotic attitude. To discourage use of strained telephone and transportation lines, for instance, fictional characters were not portrayed calling loved ones long distance for "trivial" conversations.

Wartime gains for women in professional and semiprofessional work were so small that category declined in proportion to other areas of female employment, and women failed to improve their position relative to men. This occurred primarily in the teaching and nursing fields. The absence of men did provide new opportunities for women lawyers, doctors, musicians, journalists, and scientists, but the numbers of women entering these jobs were not sufficient to alter overall trends. Moreover, most professional fields required considerable education: war work lured many women away from training in the sciences, for example, before they completed a full course of study. Even those who continued would not finish their professional training until the war was over and the male competition had returned.

Although the exigencies of war temporarily promoted somewhat greater opportunity for women to study in traditionally male fields, the war also contributed to the withdrawal of women from high school and college. As enrollments climbed in the postwar period, women graduated from college in ever-increasing numbers, but relative to men, their educational attainments declined. Moreover, the content of their education prepared women for social and economic roles that sustained the polarization of the sexes.

While women's employment underwent the largest and most visible change during the war, the absence of men also expanded women's involvement in a variety of educational, civic, cultural, and recreational activities. Educational opportunities widened as colleges sought to compensate for declining male enrollments, and the national emphasis on science and technology encouraged more women to prepare for traditionally male fields. Some institutions admitted women for the first time, and others relaxed quotas which had restricted women's admissions. The shortage of men also increased women's participation in civil and political affairs. Several states admitted women to jury service for the first time. Women replaced men as political party workers and leaders at the local level, and they enjoyed their greatest gains as state office-holders since the 1920s.

The Weather Bureau During World War II

By today's standards, Weather Bureau offices of the early 1940s were Spartan. Communications consisted of two teletype-writers and usually one or two telephones. Observational instruments were provided for normal surface observations, and a few locations took upper-air observations.

Both the teletype-writer and upper-air observations were relatively new to Weather Bureau operations prior to World War II. Both had been implemented in the 1930s and Weather Bureau employees still were adjusting to the new technology and science. Considerable research was being conducted into the impact of upper-air conditions on surface weather patterns, and frontal and air-mass theory was in the process of being accepted by Weather Bureau forecasters.

The Airways Weather Service was an important part of Weather Bureau operations as the number of flights increased rapidly prior and during the war. By 1941, the impact of aviation weather had increased to such importance that considerable pressure was mounting to transfer the Weather Bureau from the Department of Agriculture to the Department of Commerce.

Administratively, Weather Bureau operations across the United States were divided into seven regions with Regional Headquarters in New York, Atlanta, Fort Worth, Chicago, Kansas City, Los Angeles, and Seattle. In addition, a Regional Office was located at Anchorage for the Territory of Alaska.

It was into this environment that women began to enter the Weather Bureau in 1942. When Pearl Harbor was bombed, only two women were working in the observation and forecast staff of the Bureau. However, as men went to war, the need increased for women to fill critical positions.

In 1942, the Weather Bureau issued the following announcement:

OPPORTUNITY FOR WOMEN IN METEOROLOGICAL WORK

> Although there has been much prejudice against and few precedents for employing women generally for professional work in meteorology, perhaps a dozen women have obtained meteorological positions in the last few years, mostly outside the government service. However, since there is at present an acute shortage of both trained meteorologists and men for observers and clerical positions in the Weather Bureau and other government agencies, airlines, etc., women with the proper qualifications (same as for men) are now being welcomed in many places where they were not encouraged even last year. (In England women have already taken over many meteorological posts, we hear.) Therefore, women with training or experience in meteorology or its branches should apply immediately for any of the current or forthcoming U.S. Civil Service examinations in meteorology which are open to them...
>
> This will be an opportunity to join the vanguard of the many women who will very likely find careers in meteorology in the not too distant future and at the same time it will be a patriotic choice in case the war should require many women to replace or supplement men as meteorologists.

Plotting upper-air maps

By 1945, over 900 women were employed by the Weather Bureau, mostly in clerical positions or as junior observers. Many women were hired as temporary employees during 1942 to ease the immediate vacancy crunch in the Weather Bureau. For the most part, these individuals later were changed to permanent status. Most later hires were permanent.

The influx of new people required a massive training effort which was accomplished on station or through correspondence courses. Eventually, formal training courses were established at Regional Office Headquarters.

Personal View

of

HOPE N. ANDERSON

In the fall of 1944 I was in need of employment and the Weather Bureau needed weather observers. So when my husband's former MIC at Lander, Wyoming, contacted me and offered me the job, I began working at Lander as a wartime emergency observer.

I was a high school graduate. My background experience included being a sales clerk for Montgomery Ward, and being the wife of a weather observer. The Weather Bureau provided on-the-job training which consisted of personal instruction by the MIC. After six months I started RAOBs. I was the first trainee to work up a RAOB! The morale on station was very high. I received a very friendly welcome from my coworkers. My first impressions were that the Weather Bureau provided important services to the public and was a good place to work. There were two other women at the station at first, then four other women and three men.

At first my duties included taking 3-hourly observations, and I worked mostly nights - 9 p.m. to 6 a.m. (I worked for one hour every three hours taking the 3-hourly observations.) After six months I started Radiosonde observations (RAOBs) and worked rotating shifts. When RAOBs started I worked eight hours each day, five days a week.

Transmitting weather information over teletype circuits.

I left the Weather Bureau in February 1944, when my husband returned from military service and took over my job. Working there had been pleasant work. Would I do it again? Yes, I liked the MIC, he was a good "boss."

I liked the friendly, small town atmosphere and its recreation, especially the ice-skating in the winter. I feel that my major contributions were accurate and dependable weather observations, at all hours, day or night. One of the high points of my career had been taking my first RAOB.

In April of 1945 Lander had a record-breaking snow storm and I had to walk to work four blocks in snow up to my waist...walked in the middle of the street where a horse had walked...no one else had been down the street that morning.

Personal View

of

ROY L. ANDERSON

Editors' Note – The narrative of Mr. Anderson has been included to supplement that of Ms. Anderson and since he also worked for the Weather Bureau.

I started with the Weather Bureau in December, 1941, at Lander, Wyoming, and was promoted and transferred to Rapid City, South Dakota, in July, 1942. I enlisted in the military in April, 1943. (My wife, Hope Anderson, took my place at Lander while I was in the service.) Then in February, 1946, my military service ended and I returned to work for the Weather Bureau at Lander. I worked there until fall when I went to UCLA to get my BA...back to Lander until April, 1948...then to Great Falls as a weather forecaster until my retirement in December, 1974.

Before working for the Weather Bureau I had experience in farming, auto mechanics, and electrical wiring – plus two years in college. I took a civil service exam for Weather Bureau work...was accepted about three years later. I had seen a notice on the college bulletin board and applied. I wanted to work for the Weather Bureau for job security and because I liked the work, especially the challenge of weather forecasting.

At the first station in Lander, Wyoming, the MIC gave me excellent training in weather observations. I was welcomed in a very friendly manner. The morale on station was excellent. We enjoyed our work and enjoyed doing the job to the best of our abilities. My first impression was that it was a good place to work...but with frequent night shifts.

My duties included taking 3 and 6 hourly surface observations and entering the data in record books. Later I took RAOB soundings, and after 1948 I did aviation and general weather forecasting. I rotated through all shifts, working eight hours per day, five days per week. (Sometimes 6 on – 2 off until a 4-day weekend.) At first there were two men, then five men at Rapid City, later, after 1948, at Great Falls usually 20 men and four women. My starting pay was $1440, promoted to $1620 at Rapid City (1942–43).

By working for the Weather Bureau we were doing an important job for the government and the nation. I would do it again, because I liked the challenge of the work. I think that my major contributions included reliability, always on duty as scheduled. The high point of my Weather Bureau career was promotion to aviation forecaster at Great Falls, Montana, in 1948.

At Rapid City, South Dakota, during winter the wind was so strong the radiosonde balloon at release was at such a low elevation angle the blowing snow obscured the balloon, and although the sky was clear the radiosonde balloon would not be sighted at all, preventing wind direction data...this sometimes went on for 4 days at a time. Most unusual.

On a personal note, while I was in the Army my wife "held my job" in the Weather Bureau at Lander, Wyoming. After the war I returned to work at Lander, taking the position my wife had occupied, and later was promoted to forecaster in Great Falls...retired in 1974, and this year, September 29, 1990, my wife Hope and I are celebrating our Golden Wedding Anniversary...both still in good health. We are enjoying retired life. Weather Bureau employment helped make it a good life for both of us.

Personal View

of

EVELYN BOUGH BAIRD

I worked for the Weather Bureau in 1943 until April 1944 - employed at Gore Field, Great Falls, Montana. I was a high school graduate and had been a bookkeeper and secretary for a Ford dealer and Farmers Union Oil in Havre, Montana. My training at the Weather Bureau was "on the job" - all employees and supervisors were very helpful and congenial.

I released the weather balloons with candles attached and charted the route of the balloon. Also released the radiosonde balloon. I usually worked "swing" and "midnight shifts for eight hours - 40 hours a week. Morale was very good.

I met my husband at work. He was in the military assigned to the Flight Service Center which was housed in the rooms next to the Weather Bureau. We were married on February 3, 1944. I left the Bureau on April 14, 1944 as I was pregnant and wasn't feeling very well in the mornings!

There were four or five women and three or four men that I remember working at the Weather Bureau at Gore Field at that time.

I enjoyed the work and the adventure of leaving my home town during the war.

Personal View

of

IRENE GEHRT BRODIE

My employment with the Weather Bureau was from 1945 to 1947 at Lander, Wyoming. At that time I was unmarried and used my maiden name, Irene Gehrt. My previous background had been high school graduation and secretarial work in civil service – War Department. The Weather Bureau provided six weeks of meteorological aide training in Kansas City. I left the Weather Bureau in March, 1947, to be married.

Irene Brodie

The opportunity had come for a challenging and interesting type of work. A call was issued for women, already in Civil Service, to apply. I worked for the War Department in Wichita, Kansas in 1944, specifically for the Army Air Corps. They had all their offices at the municipal airport as were the Weather Bureau facilities. In the spring of 1945, when the war efforts were all pointing to victory in both Europe and Japan, the personnel department put everyone on notice that the offices would start to gradually be phased out, putting a lot of women out of jobs eventually.

At this time, the Official in Charge of the Wichita Weather Bureau put out a notice that there were lots of vacancies in the Weather Bureau stations in the thirteen western states and Alaska. If any women were interested, aptitude tests would be given with emphasis on mathematics, and if passed, Civil Service transfers would be arranged as well as the training period in Kansas City. Several women did apply, but only eight or ten went through with the program and training from the Wichita area. At the end of our training, we could choose which station we wanted to go to so most of us went in different directions and I chose Lander, Wyoming. I was never sorry for the choice and it has been my home since then. I am married to a rancher, have five children, six grandchildren and look back to my choice of this Weather Bureau station as a blessing in disguise.

At the station, my duties included observations, map plotting, telephoning reports, and plotting the charts. I worked three shifts – changing every week – day, swing, and graveyard. We normally worked eight hours a day – forty hours a week. There were five women and four men at the station. I don't remember my grade or amount of pay, but it was considerably more than women were earning at other types of jobs.

Working for the Weather Bureau during World War II was exciting. We were filling jobs for the men in service, and I worked through the end of World War II and saw the return of fellows to the Weather Bureau. I liked and enjoyed it from the training period and on through my employment time. I was made very welcome by my fellow employees. The morale on station was high.

The high point of my career was learning and doing the RAOB observations. Low point was having to quit. Would I do it again? Yes – it is such an interesting and fascinating field. I think that one of my major contributions was filling a void in a field necessary to civilian and military operations.

When I came to Lander in 1945, the Weather Bureau was in the Post Office building with the instruments on the roof. The balloons for the RAOBs were inflated in an unheated Forest Service garage behind the Post Office. In the cold Wyoming winter it was pretty uncomfortable and in order to correctly coordinate the radiosonde settings with the recorder in the office, we would warm our hands around an uninsulated hot water tank in the garage, then stand with our back to the tank to keep from shivering until time to release the balloon! In 1946, a new building was built at the Lander airport with all the latest equipment and room for all phases, a very welcomed improvement. Since then, another new building was built several years ago.

A radiosonde radio kit and parachute were found in the hills about 60 miles from Lander and given to me last year. I took it to the Weather Service office and was shown how things are done nowadays – practically all automatic and computerized! However, sitting in a corner was the old RAOB recorder I had worked on 45 years ago!

Personal View

of

SHIRLEY E. KODALEN BUHMANN

My career with the Weather Bureau began in 1944. After six weeks of training in Seattle for meteorology and surface observations, I began working at Great Falls, Montana. There I received on-the-job training for RAOB. When I started work at the Bureau I was using my maiden name, Shirley Kodalen. I was married in 1947 and could not transfer to Seattle. Also, after I married an Aircraft Controller, shifts were very difficult. That was the year I first left the Weather Bureau. I worked again in 1951 during the Korean War, and have been with the National Weather Service from 1976 to the present.

My educational background included being High School Valedictorian. I especially liked science and math...and loved geography.

I'm not sure how I learned that the Weather Bureau needed new employees, but I applied for the Weather Bureau and CAA [Civil Aeronautics Administration] - the Weather Bureau answered first, and I passed the test. It was WARTIME and girls were needed. (I didn't like secretarial work and the Weather Bureau sounded much more exciting.) "Those were trying times," probably best describes the world when I graduated from high school in the spring of 1942. It wasn't too long before most of my friends and relatives were in some branch of military service or working at a shipyard.

Before long word began to come home: One friend was badly wounded by a bomb at Clark Field in the Philippines. Two of my classmates were killed at Bougainville. Another was shot down over Africa and ended up in an Italian prison camp. My best friend's brother was on a B-17 that disappeared over Europe. A friend was badly burned on a mine sweeper. My cousin parachuted out over Germany and spent three years in a German POW camp. And the list goes on and on...

I felt so inadequate, studying Secretarial Science. I needed to do something to help win the war. When I heard that young women were needed in the Weather Bureau and CAA, I put in applications and took tests. When the Weather Bureau offered me a job as a trainee Junior Observer, I was ready.

I believe the young women who worked for the Weather Bureau during those wartime years made a major contribution to the war effort...and I was very proud of us. Since Great Falls was a B-17 Base, I felt my job was extremely important.

As a Junior Observer, my duties included doing surface observations, PIBALs, RAOBs, and map plotting. I worked rotating shifts, and often it was necessary to put in unpaid overtime because RAOBs were very fragile and required many releases. Normally eight hours a day were scheduled...and six-day weeks were necessary. Often days were ten hours long and days off were only a dream, because we were shorthanded.

The personnel at our duty station included the MIC, 1st Assistant, FAWS [Flight Advisory Weather Service] OIC, about four senior observers and six or eight junior observers. (At times, four Jr. observers.) Pay at that time was as follows: SP-3 - $1440 annually; SP-4 - $1620; SP-5 - $1800.

They were shorthanded at the Weather Bureau, so I was very welcome. The morale on station was usually good...but RAOB balloons and instruments were very temperamental. A shipment of reconditioned instruments meant troubles.

I felt very proud of my job...and believe girls did some very good work...at a very important time in America. Would I do it again? Yes. I liked the work...it was exciting and I felt very useful doing what I thought was very important work, and still think so. I feel that one of my major contributions was simply being able to do the job well. The high point of my career was when I was first hired. Low point - when my 1976 status was questioned. (The personnel director thought I was "illegally hired" because of my wartime appointment.)

One Christmas Eve I had to work and was feeling pretty sorry for myself. When I walked out to the instrument shelter to take an observation, it began to snow...big, beautiful, lazy snowflakes. The lights from town sparkled in the distance. I lost my lonesome feeling and was happy to be able to be outside on such a beautiful night.

Another girl and I were ready to release our radiosonde from the roof of the terminal building at Great Falls but had to wait for a B-17 that was on final approach. The B-17 touched down on the end of the runway and we released the balloon. To our horror, the balloon didn't rise. The wind carried it out toward the runway...barely skimming across the ground. It seemed like forever...but just before it reached the runway and the B-17, the balloon began to rise. The B-17 rolled on down the runway...unaware of two speechless young ladies on the roof.

Personal View

of

ANITA CORLEY CASKEY

I worked for the Weather Bureau from September, 1942, to June, 1947 at the Houston, Texas, Airport Station, after attending training school at Ft. Worth, Texas. I learned that the Weather Bureau needed new employees from an article in the newspaper. Working for the Bureau helped to replace men for combat duty.

My previous educational experience included one year at Rice University as a chemistry major. When I began work, I was using my single name – Anita Corley, and later used my married name – Caskey. I left the Weather Bureau in June, 1947, when my husband returned from service, to start a family.

I began at grade SP–4 with the pay at $1620 per annum. Grade and pay increases were as follows: In 1944, SP–5 – $1800 per annum; in 1945, SP–6 – $2000 per annum; in 1946, SP–6 – $2450 per annum.

Anita Corley (1942)

My first impressions of the Weather Bureau were very good. I was the first woman on station and was received warmly by the other employees. The morale on station was good.

The duties included filing observations; drawing maps; balloon runs; and advising pilots. When all the men left except, the Official in Charge, I became his assistant until the men started returning from war.

The shifts were midnight to 8:00 a.m.; 8:00 a.m.to 4:00 p.m.; 4:00 p.m. to midnight; and 6:00 a.m. to 2:00 p.m. We worked eight hours daily, 48 hours a week.

I enjoyed the work – enjoyed it all. I felt I was helping the war effort. Would I do it again? Yes. It was a good experience. My major contribution was doing my job as well as possible. The most interesting experience during my career was the 1943 hurricane.

Personal View

of

DOROTHY HURD CHAMBERS

I worked for the Weather Bureau from January 1944 to 1948. My assignments were at Denver Stapleton Field and one year at Lander, Wyoming. I was always interested in weather and needed a different job. I had heard that the Weather Bureau was giving tests for jobs so I took it and passed. They sent me to Kansas City for a six-week training course. Then I was sent to Denver to my great pleasure. While there I used my maiden name, Hurd, as I was not married then. My age was about 29. I left the Weather Bureau in 1948 because I was tired of working shifts.

My previous background experience had included one and a half years at a teachers' college art school. In 1942 I left Florida to go to St. Louis to work for Curtis-Wright Aircraft Factory. Worked on drawings for new airplanes. In 1943 the work slowed down and I spent a lot of time in the library. Some books on meteorology were fascinating, so I thought I'd like to get into that.

The airport (at Denver) was pretty small and not very busy but we had full days taking the observations and sending up the balloons and radiosondes. I was received very cordially by the other Weather Bureau employees. There was no discrimination at all.

Working at the Weather Bureau was fascinating. I was an observer. My duties included taking observations every hour and half-hour, sending up ceiling balloons every six hours, radiosonde balloon flight every six hours, and putting coded messages on teletype. The shifts were 5:30 AM - 2:00 PM; 3:30 PM - 11:30 PM; 11:30 PM - 8:00 AM. We worked 8 hours a day, forty hours a week. There were no lunch hours, we brought our lunch and ate in the office while working. There were perhaps forty employees at Denver, twelve at Lander. There were seven of us (women) that I remember in Denver. In Lander there were four women observers. As pay, it seems like we got $90 for two weeks the first years.

The morale on station was very good. I loved working there. In Lander, the town people were very friendly and included us in their activities. The staff were like brothers and sisters. We went hiking together in the mountains, etc.

I liked doing a RAOB. That was a high point of my career. Also, we were all sociable. There were no low points, but some scary times when we observers had to tell the tower they had to send planes somewhere else or go to instrument landing when the ceiling or visibility was low. The tower men didn't like us "young girls" telling them what to do. But we didn't have any crashes at Denver anyway.

Dorothy Chambers (left) and another Weather Bureau employee plotting weather maps from teletype reports.

My year at Lander, Wyoming, was fun, just sending in the observations and radiosondes. It was a great town to live in near the mountains and full of real westerners.

By working for the Weather Bureau during World War II, I felt we were doing something very important to help keep the airlines and the military planes going. I would do it again. It was more interesting than a desk job even when weather was rough. I feel that my major contributions were finding the jet stream and helping the military planes.

In Lander, on the 3rd of July, I was all alone at the mesa where the weather station was, a whole lot of Indians camped and practiced their dances for the

parade at night. They were from Wind River Reservation. No danger, but unusual experience.

I think one woman observer in the northeast was killed in a forest fire. Many of them had to walk to work in all kinds of weather night and day. We are all getting pretty old, but I'll bet most are active.

[Ms. Chambers has included a newspaper clipping which she had written. It is from the Colorado OLD TIMES, dated December, 1986, and entitled, "We Found the Jet Stream". In regards to this, she gives the following statement.] I believe we did, too. The gasoline engines couldn't go very high and jet engines were just being developed. Sitting at that drawing board and plotting the theodolite readings, it was amazing to me to get readings above 30,000 feet of 80 - 120 mph or more. The pilots were amazed too.

Our ceiling balloon would often start out toward the mountains. Then suddenly it would come back fast, with us twirling the knobs as fast as we could to keep it in sight as it sailed east. Later, when plotting the run on a chart, we would discover amazing wind speeds of 80-100 mph at 30,000 feet or so. In those days planes flew much lower so they hadn't discovered the jet stream. Now it is used routinely and planes often get in ahead of schedule. Also the jet stream's position determines the weather pattern.

We were told, "Women can't do this kind of work." That was in 1942, and trained weather observers were desperately needed. Trainees were scarce as men were drafted or enlisted. The only possibilities were we women. They had to let us try this technical, rugged, outdoor work. We tried it. We succeeded! We proved them wrong and practically ran the weather stations for the rest of the war.

We, girls in our 20's mostly, walked or drove to our jobs all over the country in all kinds of weather, all hours of day and night. We learned to make the vital weather observations that the pilots depended on. Mere girls decided when planes could take off or land. Sometimes the pilots would come in and try to get us to change our ceiling or visibility report. Handsome, glamorous pilots were pretty hard to resist but we stuck by the rules.

We girls showed the world that "man's work" could be women's work too. We even taught some men from the Air Force and several foreign countries. Some women stayed on after the war, many got married, or got tired of working shifts. I left to go back to drafting with the Highway Dept. It has always been a great satisfaction that I was privileged to be a part of aviation history.

Personal View

of

EILEEN T. LEONARD DELAURENTIS

I worked for the Weather Bureau from June 12, 1944, through June 30, 1973. My work was at the WBAS, Tucson, Arizona for nearly twenty years and just over nine years at the Air Resources Laboratory (ARL) Las Vegas, Nevada. (The last few years we were associated with ERL, Boulder, Colorado, but there were still strong ties to the Weather Bureau.)

Eileen DeLaurentis

I worked for the Bureau because I had learned very soon (after college) that I was not meant to be a grammar school teacher. Having been reared on farms in the midwest, I had always been interested in weather and science, but the Weather Bureau job was "an accident of history." Having decided to further my education in math and/or science, I visited the Weather Bureau City Office, Phoenix, Arizona, to gather information by talking to the Official in Charge. At the end of our discussion concerning possible education institutions offering courses in Meteorology (rare then), he asked whether I would care to apply for a war-time appointment to the Weather Bureau as a Junior Observer. Frankly, I jumped at the chance; such a possibility had never entered my mind. I entered service as Eileen T. Leonard and continued as Eileen T. DeLaurentis.

My previous experience and education included the following: country girl, farm work; mother's helper and car-hop in high school; nurse's assistant at infirmary in college, also teaching assistant in Geography Department my senior year (not a formal appointment - the meteorology professor was drafted; and I led the class, and conducted and graded the tests for the remainder of the term under the supervision of the head of the Science Department who tested and graded me.) After graduation, I worked briefly as a Clerk-Typist and (for about three months) as a substitute teacher of a sixth-grade class. (The male teacher had walked off the campus in early March.) I was temporarily at liberty and was called to finish out the term. I was offered a contract for the following year, but I respectfully declined the opportunity.

In the field of education: High school graduate - 1938; College - B.A. in Education - 1943 - with Highest Distinction; Major - English; Minor - History; teaching Minor - Science, including Meteorology, Geography and Economic Geography; University - first semester College Physics (later for the qualifying exam - late 1947)

I attended the Observers' School at Pacific Palisades, California. It was an extremely concentrated 6-week course in observational practices, PIBALs, map plotting, codes, and, of course, Circular N.

At the Weather Bureau I was welcomed wholeheartedly - they were short-staffed! The staff was friendly and cooperative, also long-suffering; the boss was pleasant, patient, and a bit formal; the public was generally appreciative; the airline personnel generally OK, but occasionally demanding; the media (newspapers and radio) thankful for any crumb; and the Military slightly supercilious and condescending. Intuitively, I felt that upper level Weather Bureau Administration was a bit stuffy and rigid. As for the work - it was fascinating and challenging, and the time pressures were horrendous if there was the least bit of bad weather.

Morale on station was usually very high, particularly during the period when staff was predominately female. I remember only one brief period soon after the war when we younger SP-5 Observers were all upset at the same time - not at each other, but at the "powers that be." I can't even remember what we were mad about. Probably Congress had denied us a raise.

The duties included complete surface, synoptic, and upper air (PIBAL) observational schedule. Checking previous observer's work for observational errors; plotting surface weather maps, upper air charts, and adiabatic soundings; decoding and transferring to maps and charts the analysis received from forecast center, including isobars and precipitation areas; preparing weather (Wx) data and summary for newspaper or radio publication or presentation, and answering inquiries from Airline Ops. Officer or Air Corp Weather Office, including ceiling balloon or SPI Wx observations, if requested or required

by existing conditions. After end of War, prepared and delivered live on-air weather broadcasts for radio station; answered public telephone requests; briefed some executive (corporate) pilots mostly by telephone, but occasionally in person; delivered, over telephone, Wx data and forecasts at the request of private operators and (very rarely at first) private pilots; and recorded and checked climatological data for the station. After monthly data was checked by the National Record Center, transferred it to Permanent Climatological Record for Station (the Big Book). We needed to be cordial and cooperative, and as informative as possible, to walk-in traffic (airline passengers, military personnel, farmers and ranchers, and just plain curious people).

Please note that immediately after end of the War, all the ancillary duties (private pilots requests, public and corporate or business related requests, commercial flying activities, etc.) increased geometrically in number and became, in fact, major portions of our duties with no commensurate increase in staffing patterns. In fact, I'm certain that only the introduction of Facsimile equipment (thus eliminating most charting and plotting activities on-station) saved the Weather Bureau from collapsing into complete chaos.

My shifts were mostly nights or evening shifts. During the War, we had a six-day week and the schedule (with full staff) was two mids, two days and two evenings/24-hour day off - midnight to midnight. When we went on a five-day week, we went to two mids, one day, two evenings/48-hour days off. Eventually, we went to a more traditional, slower rotation, though duty-hours were much more varied. So, you could say I worked some exotic shift for nearly twenty years.

Basically, the first year or so was a six-day, 48-hour work week, with no leave except for emergencies. Sick leave was allowed. Naturally, we always worked holidays, unless it was a scheduled day off. There was no such thing as minimum staffing. Rather, we were nearly always at minimum staff levels. With the winddown after VJ Day, we went to a five-day, forty-hour work week, vacations were allowed, and there was some overtime scheduled to cover vacations or sick leave.

At the station, in the beginning, there were six employees - two men and four women. The pay for the different grades was as follows: SP-3/$1440 per annum; in three months - SP-4/$1620 per annum; one year - SP-5/$1800 per annum.

I retired at close of business, June 30, 1973. Actually ARL-Las Vegas had been transferred en masse to ERL-Boulder about the time ESSA became NOAA. I took an Involuntary Retirement after more than twenty-nine years service when my position was abolished during a Reduction in Force (RIF). It was either the third or fourth RIF I had been through and it was just too much.

The high point of my career was probably my promotion, in May, 1955, to Grade GS-7, Meteorologist (General Forecaster.) I had come of age in the service. The low point was certainly when I was obliged to request a reassignment to WBRS, Las Vegas. The request was the end result of another RIF. It involved a three grade demotion - from GS-9/6, Meteorological Technician (General Forecaster) - to GS-6/10, Meteorological Technician (Charting); and a salary cut of $1370.00 per annum. This event was very traumatic; my morale was shattered, and my sense of job satisfaction severely eroded. My involuntary retirement nine years later added insult to injury. Years later I realized that these two negative events were another "accident of history' that forced a dramatic change in the direction of my life - a change which I would have been loath to make unless pressured by external forces.

I truly enjoyed my Weather Bureau career during the War and for years thereafter. It was a necessary and, to me, valuable contribution to society and to the "War Effort." It was always challenging, with just enough routine to feel comfortable about my competence on the job, but enough variety to eliminate boredom. I had been fascinated by numbers from early childhood. Math was my favorite subject; chemistry and physical sciences were close behind. And I enjoyed contact with people. It was the perfect job for me. I had a lot to learn and had always enjoyed learning. Study and changes were no trial to me. There were negatives. Shift work (loss of sleep) leads to chronic exhaustion. It also is not conducive to any social life. Sometimes I wonder that any of us managed to marry. A normal family life was impossible - our spouses deserved high praise.

Would I do it again? I wonder. If all things were equal, I would. But I don't think all things are equal. The office seems isolated, sterile, lonely and awfully quiet. The weather is still there, but the machines seem to do most of the work. Do they make the decisions too? I realize my question is facetious, and my analysis over simplistic; but I do not believe it would be nearly as much fun. Easier perhaps and less exhausting, but certainly not the same.

My contribution to the service was doing the very best work I was capable of regardless of the task. Others at the station were more clever at inventing aids that made the work easier. Among us, we brought a few changes in the interpretation of Circular N. My major contribution was probably the fact that I "hung in there" for as long as I did, and earned the respect of my coworkers.

There were many experiences of interest to me. But things have undergone such changes that younger observers might not understand their importance. Do you understand how frustrated an observer gets when the fifth balloon is brought down by a B-B gun at about 2:30 a.m.? You probably can understand how one feels at 7:10 a.m. after a slip on the top step of the flight up to the observing deck ends with one cracking her head on the concrete ramp with her legs extending through different open steps of the stairway. And the phone is ringing off the hook -

the radio station is calling for the live on-air radio broadcast, and the observer hasn't yet plucked the fresh state-wide data from the teletype.... The boss got to the office on time that morning! Celebrity seekers are usually interested in my Howard Hughes story. The CAA operator came in, in the wee small hours, to tell me that H.H. had declared an emergency and was landing (on a military field closed to civilian traffic.) A short time later, in walked a very tall drink of water followed by a handful of aides. One of them asked if Mr. H. could use the phone. I replied, "Yes, as long as it's not long distance." Mr. Hughes then asked me a series of questions about Nogales, Arizona. He couldn't hear my voice, so it was a triangular conversation. He asked, I answered, the aide repeated to Mr. H., etc. (He was very polite, and I felt rather sorry for him.) Eventually, the emergency was resolved, and off they went to Nogales. (They needed the lights turned on at the Nogales Airport and information about possible hotels.)

You may have noted that every thing happened on the midnight (graveyard) shift. That's not exactly true - I just worked so many of them. (My husband was on permanent graveyards back then, and I didn't mind.)

Apologia: I didn't start out to write a book, but I got carried away. I thought "If after nearly fifty years, someone asks, why not answer?"

Long live the Weather Bureau - even if they do call it "the National Weather Service."

Personal View

of

ANNA MAE DEMING

The Weather Bureau station was moved to Payson, Arizona, after World War II as Navy wounded were being flown from San Diego to Salt Lake City. When the station moved to Payson in June 1948, I was asked to take the test and apply. I began working for the Weather Bureau at that time. I went to work for the Bureau because it is a beautiful hobby, and because we had two children in college.

My previous experience included being a high school graduate and telephone operator. Training for the Weather Bureau included lots of study and lots of time spent with chief observers. There were two men and two women on station. The pay was 75 cents per hour. The duties included complete observations, maps, and public service. I worked all shifts, eight hours per day, forty hours per week.

Although I have been an employee for 23 years at Valley National Bank, I have never left the Weather Service. All instruments were moved to our yard when I became an "A" station and I have continued to work. As an "A" station, I earn today, (14 hours per day - 7 days per week), $12.40 before taxes.

I feel that the Weather Bureau provided a very needful, proud service to the Rim Country of Arizona. Although morale on station was mediocre, my reception by the other employees was okay. The high points have been the good rains, snow on the rim, and fine people. I would choose to do it again.

[Editor's note: In response to the question "What did you feel were your major contributions?," Ms. Deming sent clippings from the Free Mogollon Advisor (April 17, 1985) and the Roundup/Advisor (July 25, 1990). In the 1985 article, Ms. Deming was honored and commended for 35 years of service with the National Weather Service. The article mentions that Anna Mae still calls in seven daily observations which are recorded in the National Climatic Center in North Carolina and are published in the Arizona Republic and the Free Mogollon Advisor. The July 25, 1990, article in the Roundup/Advisor is about the monsoon storm which flooded Payson the previous Sunday. As a long-time observer in the area, Ms. Deming's opinions and advice were sought regarding the storm and the possibility of more to come. She said, "If we're going to have a typical monsoon season this year, we're only at the beginning of it. We could get storms like that through most of August."]

[During the time of the recent fire in the Tonto National Forest, Anna Mae provided temperature, dewpoint, and wind information to all callers. She is still making major contributions to the Weather Service today!]

[In answer to the question, "Do you have any interesting stories of your Weather Bureau experiences?," Ms. Deming has given reference to the newspaper clippings. The Free Mogollon Advisor states the following: "Anna Mae worked in the first weather station, established July 1, 1948 on Indian Hill. It was a 24-hour station, broadcasting every half hour during storms."]

[The report in the Roundup/Advisor about the storm which had poured two inches of rain in one hour on the town of Payson shows that Ms. Deming's interesting Weather Service experiences are continuing at the present time.]

Personal View

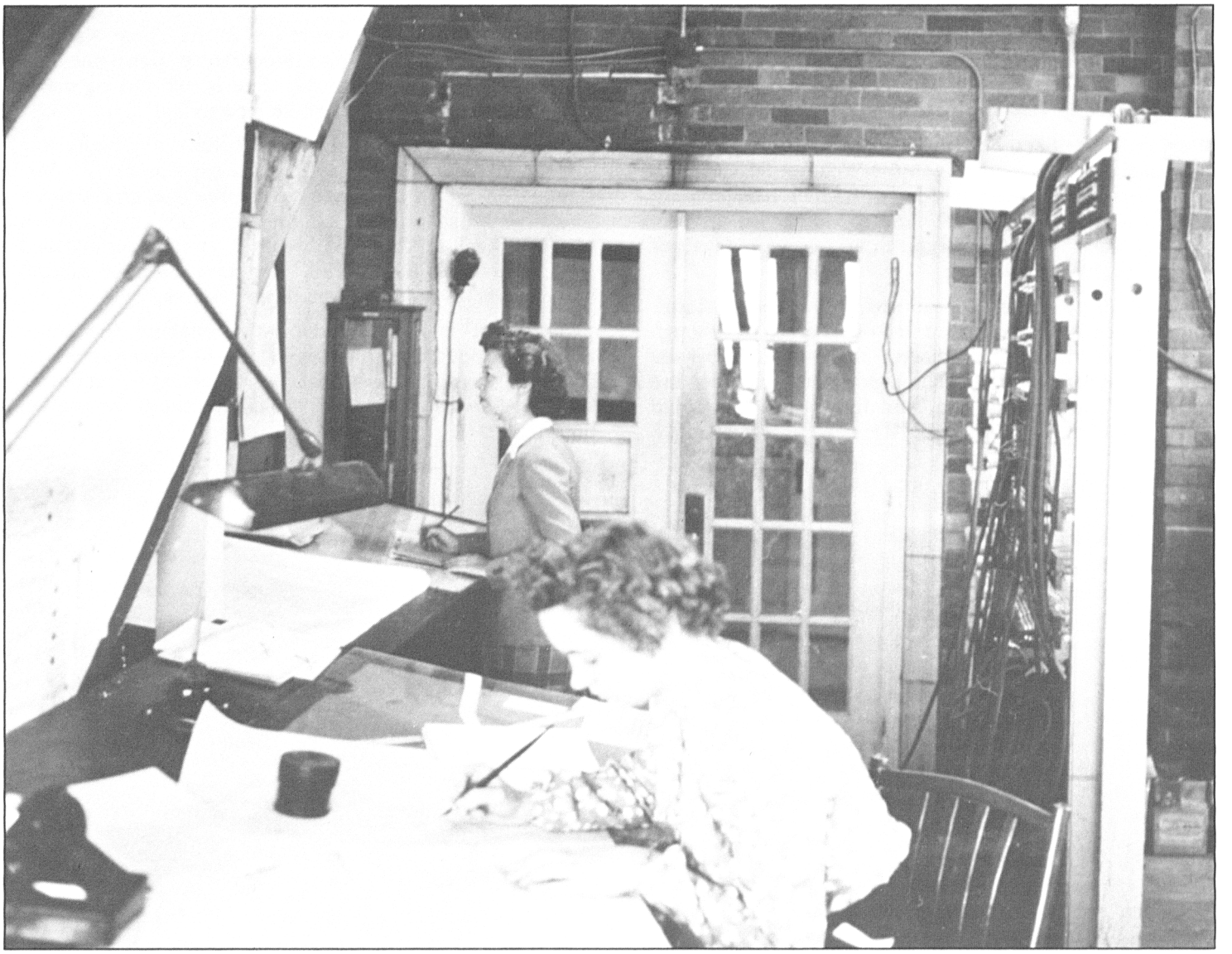
of

VIRGINIA TREDINNICK DENMARK

The following is an account of how I happened to go to work for the U.S. Weather Bureau during World War II. I started work in April, 1942, just two months after the Department of Commerce inaugurated the policy of using women as assistant weather observers. I worked at the Bureau under my maiden name – Virginia Tredinnick.

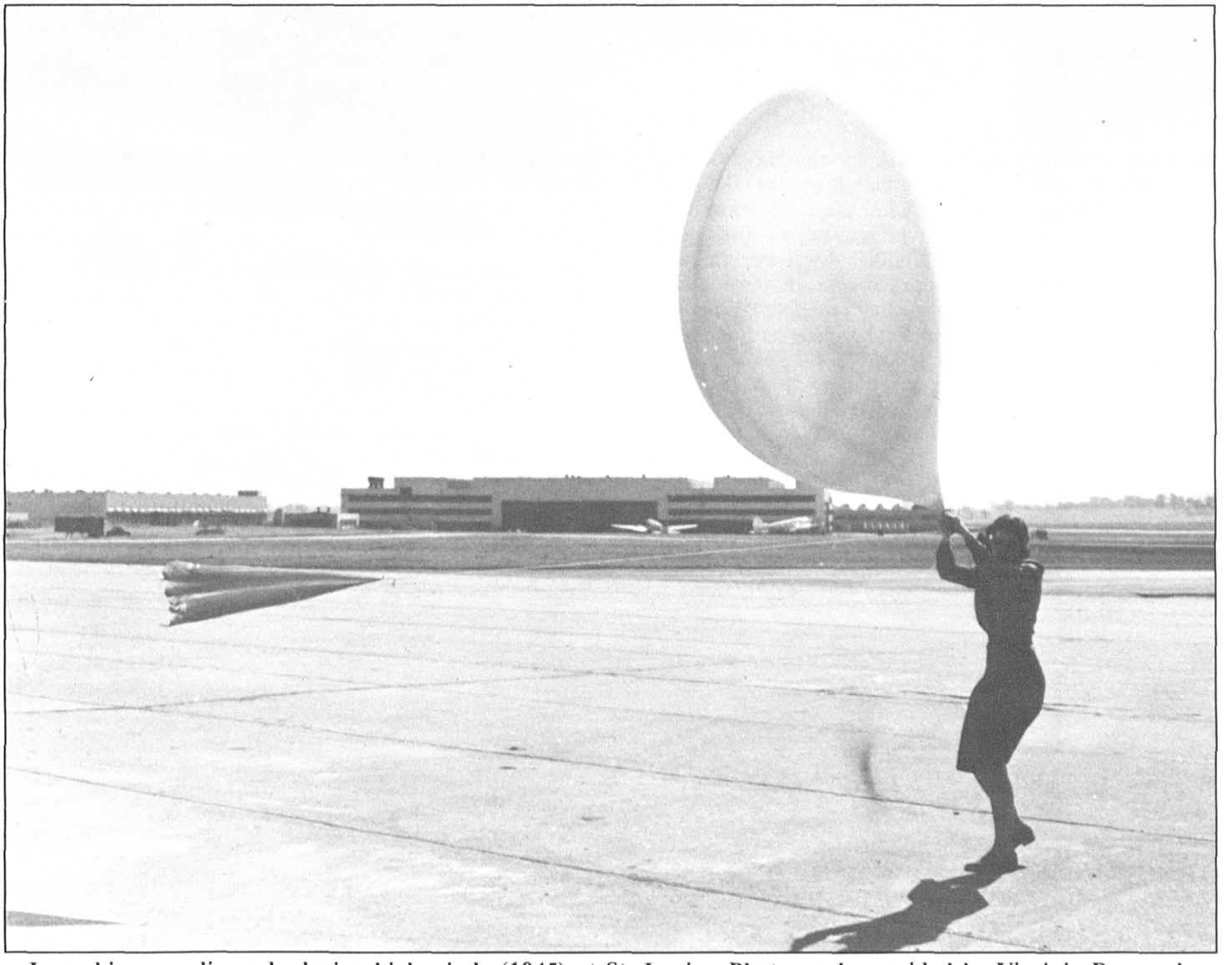
I had graduated from Washington University in June, 1938, and had been working as a secretary for the Family Service Society in St. Louis. One day I received a phone call from the university employment agency asking if I would be interested in an unusual job at the airport. When I said "Yes", they went on to tell me that it would be at the weather station at Lambert Field. So I called and arranged to go out for an interview.

The requirements were that I have an A.B. Degree with math through calculus and a year of physics. I was interviewed by the Official in Charge (OIC). I was accepted for the job which I thought was a secretarial job! The OIC had not had a secretary, so he made good use of my talents for several weeks – getting his files in order, etc. Then one day one of the men told me when I came to work that he was to teach me how to make radiosonde observations and handed me a copy of "Circular P", the instruction book. He also showed me a rather large piece of equipment which he said I would learn to use!



Virginia Denmark (at map desk) and another Weather Bureau employee plotting weather maps at St. Louis, Missouri (1945). Telephone equipment in center of room had to be circled when taking observations.

I had wondered why it always seemed that some of the employees were there when I got to work and some stayed on the afternoon. When I finally asked, I found out that people worked shifts and that there was another girl who had recently been employed who was working from 9 p.m. to 5 a.m. making this night observation and I was to make the day observation. Things finally began to make sense! Ann was still going to college so she worked the night shift and I was hired to do the day shift. Releasing the big balloon in a high wind was a real challenge as was trying to get one aloft in rain or snow.



Launching a radiosonde during high winds (1945) at St. Louis. Photograph provided by Virginia Denmark.

On-the-job training at that time was all that was available. In a few months they decided to lower the qualifications to high school graduates with math and physics credits. By December of 1943 there were four girls and we began being trained to take surface observations. All training was done on the station at that time, but later a training center was set up in Kansas City at the Regional Office. By 1945 there were eleven people on the station, including the OIC, and five were women.

We changed shifts weekly -- day shift, evening, and mid-shifts. We worked eight hours a day, six and seven days a week at first; eventually five and six days. As I recall, the pay was $1440 a year.

As I recall, the men usually worked as forecasters with the Flight Advisory Weather Service (FAWS), while the women did the observational work. But later some of us did "adaptive forecasting", and I recall the shocked voices of pilots calling in for a forecast and getting a woman!

With one or two exceptions the men accepted us and were helpful in training us and working with us on shifts. Bill Denmark became the 1st Assistant to the OIC in 1944 and I left the Weather Service in June, 1946, to "marry my boss". Bill continued to work for the Weather Service, becoming a State Climatologist in 1961 and retired in June, 1971.

The Weather Bureau was an interesting place to work. It was a most interesting job which made other jobs uninteresting. We sort-of felt we were "keeping them flying," and that was important. The morale on station was good most of the time. It is difficult to say what would be the high or low points of my career. I enjoyed forecasting. There was no particular low point. Would I do it again? Yes - weather is a most interesting subject - never two days the same.

Probably about 1944 several Air Force officers moved into an office next to us as a forecast unit and of course we worked with them. In extremely cold weather they would lend us one of their leather and sheep-lined flight jackets when we had to go up on the roof to take "pilot balloon observations". A number of military flights came through St. Louis and some stopped off. One B-17 pilot, a colonel, used to bring his dachshund with him. He said that he couldn't understand why the dog was friendly with us when he didn't really like women! We told him it was probably confused by our wearing slacks.

There was a primary training base for the Navy on one side of the field and they practiced landings and take-offs. One day when I was releasing one of the big balloons with the radiosonde attached, I let it go into the air just as one of the little biwing planes was landing. I was working with one of the men from the city office who wanted to learn about the observations. We got a "red light" from the office meaning that we needed to change a setting on the instrument, so when we got the "green light" I forgot to check the control tower which now had a red light on me!! There was no harm done, but the Controller didn't mince words!! I came across a copy of a photo [cover photo of this document] taken of me by a local newspaper photographer for a full-page picture in the rotogravure section on December 19, 1943. As a result of that picture I became "the pin-up girl" for an Air Force Weather Squadron in Africa!

The mother of one of the boys sent him the picture and they voted me "the girl they would most like to spend an afternoon with on a white altocumulus cloud"!! I recall that the Post ran a series of pictures and articles in the section entitled "St. Louis Women in the War Effort".

I understand that I was the second woman to be hired by the "Weather Bureau" in the country. The first woman was hired in St. Louis two weeks before.

Regional Office observation training class for new Weather Bureau employees at Seattle, Washington (1943). Photograph provided by Virginia Denmark.

Weather Bureau employees at Lambert Field (St. Louis) in 1946. Photograph provided by Virginia Denmark.

Personal View

of

G. FAY DICKERSON

The period of time that I worked for the Weather Bureau was approximately November, 1942, to December 31, 1949. A friend told me about a woman who had just been hired by the Weather Bureau. I telephoned the downtown office for information and was disappointed to learn that one could not apply for a particular location, but that a training class would begin shortly in Kansas City, Missouri. I applied and was accepted.

I had one year at the University of Denver and was looking for a job that would enable me to continue my studies. Part-time jobs were very low paying, so full-time work for the U.S. Weather Bureau was an attractive alternative. I had taught in two different rural schools in Chase County, Nebraska, right after high school. During this time, I had summer school at Colorado State College of Education in Greeley (now the University of Northern Colorado) and had taken one or two correspondence courses from the University of Nebraska – the one I recall was an English composition class. The other may have been in educational psychology. In my freshman year at the University of Denver, I selected library science as my major.

I was enrolled at a Weather Bureau training class that met near the old Kansas City Municipal Airport by the Missouri River. I stayed in a fine old house on Swope Parkway that had been adapted for working women or students. I do not remember the composition of the class nor the number, but some of the students appeared to have had previous weather observing experience or meteorological studies. I was conscious of my comparative inexperience. The instructor, an attractive Finnish-American meteorologist, was an excellent teacher. She made us aware of our future responsibilities as weather observers and took advantage of the winter fog for practice observations. We also observed or helped with some balloon runs but more time was spent in the classroom setting.

After six weeks, at the conclusion of the course, I was assigned to North Platte, instead of Denver. Here, on-the-job training continued. The Weather Bureau Manual remained an essential guide for study and for quick reference. Independently, I studied a high school physics text. Much later, after becoming an assistant to the research forecaster, I did some reading in statistics.

I was received very well by the Weather Bureau employees. There was enough routine work to keep each person busy and special weather conditions required constant attention. Observers welcomed their replacement at the end of an 8-hour shift and usually had special information or experiences to share. In North Platte, my primary friends were from work; in Denver, good relationships continued, but I was less dependent on friends at work for I had returned to a familiar city. Though I have not kept in touch with friends from WB days, that is more a factor of physical distance than of disinterest.

I recall that in North Platte the chief observer (I've forgotten the title) preferred assigning a woman to the task of climbing a pole above one of the hangars to remove the anemometer, carry it down for checking, and then replacing it. The climb intimidated me but I tried not to show it, knowing that this was his way of testing the stamina of women observers.

A first and lasting impression of the Weather Bureau is of responsible, dedicated professionals. The women were welcomed, careful work was appreciated, and forecasters or more experienced observers were available for consultation. Another impression, because the small building at North Platte was shared with the CAA in one room and the Weather Bureau in another, is of cooperation and interdependence among the offices. They sent our reports and we received teletype reports from them. The CAA communicated directly with in-flight pilots and informed us of unusual or changing weather conditions. One of the men, an "old hand" in the CAA with weather experience, had a calming manner and was very supportive during some of my first thunderstorms when I was the only observer on duty.

In North Platte, the routine duties included hourly and more detailed 6-hourly weather reports which were entered by teletype. As information was received we plotted the 6-hourly map which had considerably more detail when there was frontal activity and changeable weather conditions. These included low ceilings, reduced visibility, precipitation, thunderstorm activity, and strong wind. Whenever conditions changed, a special weather report was given to the CAA for immediate transmission.

The same schedule was followed in Denver, but the office had its own teletype communications. Here a more detailed map was plotted, often by two observers so that it would be available as soon as possible for the forecaster.

The most accurate information was taken from instruments: the thermometer, the wet bulb, the ceiling light, the anemometer. A theodolite was used to chart and time the ascent of a balloon with the ceiling being the height at which the balloon disappeared into the cloud layer. Later plotting gave wind velocity and direction at certain levels. At night a small candle in a paper lantern or a battery light was attached to the balloon. The ceiling light at a stationary position was an earlier device that helped the observer estimate the ceiling height.

A temperature and dew point formula was useful for estimating the height of cumulus clouds. Radiosonde equipment was introduced during my time at North Platte. This still involved the use of a balloon, but a much larger one, and a transmitting device was attached instead of the lantern and light. The data was electronically plotted on graph paper and when interpreted provided accurate information about air pressure in millibars, temperature and humidity as well as wind direction and speed at much higher levels.

In North Platte, there was a regular rotation of the day, evening, and night shifts. At Stapleton, with a larger observer staff, there were more opportunities to adjust shifts to account for personal preferences. After 1945, I worked more nights so that I could take evening classes at the University of Colorado's Denver Extension. Then, during the last year or so when I was assistant to the research forecaster, I had the luxury of straight days.

We were on an 8-hour, 5-days a week, 40 hours a week schedule. During some of the war years, there was a 6-day schedule with overtime paid for the sixth day. There was a salary adjustment shortly after regular overtime ended.

I recall that there were two men and four women at North Platte. In Denver, a forecasting station, there was a much larger number, including forecasters, telephone operators, and administrative personnel. An average number of observers may have been four men and five or six women, but I was there for almost four years after the war when some women left the Bureau or were transferred, and some veterans returned.

The morale on station was generally excellent. Observers helped each other when duties were heavier in one area than another. Frequently, one would stay overtime or come in a bit early just to help a fellow observer. We enjoyed composing short, well worded messages that explained unusual and/or changing conditions. We had friendly competition about the length-of-time required to plot a map.

I left the Weather Bureau on December 30, 1949. I had passed the qualifying examination for a permanent position, and was somewhat apprehensive about giving up the security of the Weather Bureau, but it was time for me to finish undergraduate work at the University of Colorado. This I afforded by withdrawing my accumulated retirement funds. Later, I earned an MA at McCormick Theological Seminary in Chicago, and an MLS from Rutgers University, School of Library and Information Services.

The high point of my Weather Service Career definitely was the news that after about a year and a half in North Platte, my request for transfer to Denver was being honored. Although I am a Nebraskan and have a great deal of loyalty to the state and its literary figures, I had lived and studied in Denver, had more friends there, and wanted to return. I cannot recall any real low.

As I recall, we were most occupied by work details in our specific location. I did not specifically think of my work as a contribution to the war effort, but as a service for everyone. Earlier, the Bureau had been under the U.S. Department of Agriculture and current weather information, forecasts, and annual statistics remained a service to farmers and urban dwellers alike.

However, the Weather Bureau was essential for all air traffic during this period. At Lee Bird Field in North Platte, pilots on training missions who were detained by the weather often waited in our small offices. Some shared their knowledge of the weather and a few offered to help launch a balloon when wind and precipitation made the task awkward for a single observer on a night shift. In Denver, on VE Day, some reporters came out to Stapleton for a cursory interview with those on the evening shift. I remember feeling that they were only superficially aware of the Weather Bureau's importance; there was more excitement elsewhere.

Would I do it again? Yes, if I were in my twenties. Though I applied because I needed the money, it was never just a job for me. There was satisfaction in the hard work, in knowing that we earned our pay doing essential work. I feel that being a competent team player was one of my major contributions.

The most beautiful rainbow imaginable appeared after a particularly stormy, rainy, low-ceiling night. When I went up on the roof to take the first daylight observation, the clean deep blue-gray stratus had broken at the eastern horizon showing the rising sun. Over the western mountains was a perfect rainbow affirming the glory of the morning. I paused, but when I returned after completing the observation all was quite ordinary again.

Weather Bureau personnel sometimes were permitted complimentary, orientation flights. My first was from North Platte to Denver with a CAA pilot. I mentioned that my parents lived on a farm which was on a direct line from North Platte to Denver. We flew low enough for my mother to come outside and look up. It was of passing interest for her, but I retain a memory of that peaceful, early spring scene.

A more exciting flight was the result of a routine flight from Denver to Grand Junction, Colorado, on Slick Airlines, a local service, flown by veteran pilots from Denver, to Grand Junction, to Salt Lake City. Betty, the other observer and I were not permitted to go on to Salt Lake City. After landing, instead of just waiting for the return flight, we accepted the invitation of one of the few paying passengers. He had chartered a four passenger plane to avoid a long, difficult drive to the Rangely oil fields in the northwest corner of Colorado. There was time for us to ride along on the round trip and we would see new scenery and have a lesson in geology and oil shale deposits from the engineer. The two men began looking for deer which the pilot said he always saw on this route. None were visible. On the return, Betty wisely chose to stay put, but I moved up to have a better view. The pilot remained obsessed to maintain his record, believing that we were as eager to see deer as he was to point them out. We flew rather too low for my comfort. As we skimmed above high mountains and then came to deep valleys, I had the sensation of driving off a high cliff. I assured him that we were not that interested in seeing the deer which probably were enjoying an afternoon siesta, but he kept peering below out the left window. We saw donkeys quite clearly. If rabbits had been out we think we would have seen them. The meal at Grand Junction Airport was quite ordinary, but two Denver observers were happy to be on the ground waiting for the DC-3 to return from Salt Lake City.

One Denver night, when I was the observer on duty and there was considerable ground fog and a broken low ceiling, an employee of one of the major commercial airlines called and asked to speak to the observer on duty.

He said that their pilot could see the ground from 1000 feet altitude and he wanted the observer to watch him and send a special report raising the ceiling so that he could land. I responded that I could send a special report with his name, but that I had no way of looking up and estimating a plane's height as basis for such a report. This the pilot refused. Probably he knew the airport and was confident that he could manage the situation but did not want to be held responsible. The flight diverted to Colorado Springs. Now, in the days of radar and other sophisticated equipment, low ceilings and ground fog are not such a hazard. However, whenever I am on a flight that routinely lands in spite of conditions that formerly would have closed the airport, I recall the very different rules of forty years long past and our careful following of those rules.

I retired as general editor of the American Theological Library Association Indexes in 1983 to be a partner in a free lance service. But, in late 1986, returned to edit the primary index, Religion Index One: Periodicals. From this position I retired in May, 1990.

Regional Office observation training class for new Weather Bureau employees.

Personal View

of

BETTE SILVEY DONATT

I worked for the Weather Bureau some of 1944 to 1950 at the Airport Weather Bureau, Lambert Field, St. Louis, Missouri. My name at the time was Bette Silvey.

Not certain how I learned Weather Bureau needed new employees. I applied for training because I thought it would be interesting, a learning opportunity. Thought aviation connection was exciting. This was all proven to be true. The Weather Bureau needed help. When I began training I was very young and had no vocational direction.

I took the test to qualify for the training school at Kansas City. Classes were held in the Kansas City Federal Building eight hours a day for six or eight weeks. Working from Circular N, plus extra study after class and testing was followed by supervised duty at Kansas City Airport Weather Bureau for a short time, perhaps a week. Following training, I was officially assigned to Lambert Field. Cannot recall the number in the small training class, perhaps a dozen. Assignments were made throughout Region 5. There was one other woman from St. Louis who was assigned elsewhere. Some time later she came to work at Lambert Field for TWA. While I do not recall the instructors' names, one man and one woman, they were very thorough. He gave a very accurate overview of the job, which I still recall. I do not know how long the training school had been in effect and never heard of anyone else who had attended. In the beginning I was still being trained after my assignment to Lambert Field. Circular N with updates was a forever source of reference for all. Any subsequent new employee was trained by coworkers; even if they brought experience, they had to get acclimated to their new assignment.

Obviously in 1944, the Weather Bureau was in great need of help. I was eager, though inexperienced. For the most part coworkers were kind and considerate, some more than others based on their individual personalities. There was a separate staff of mature forecasters. Some treatment bordered on paternalism. I was "low man on the ladder," and because of my age and inexperience I logically accepted this role. I worked very hard, as did most everyone, but not with a view to career advancement. This was not the case with some of the women, well qualified, who were never, I believe, seriously considered for advancement because of their gender. For them I considered this unfair; for me individually, I felt I was treated well. This was a different time.

I began working during a season of particularly bad weather at a very busy airport. Weather was constantly below Contact conditions, except Instrument or Closed classifications for flying. Everything connected with the Airport was in one long, narrow building. The ground floor was primarily the waiting room for airline passengers, ticket counters used mutually by airlines, and a restaurant open at the convenience of the management. The Weather Bureau was on the second floor with Communications, Air Traffic Control, and Army Flight Service. Additional weather instruments, inflation shelter, and, of course, control tower were on the roof. More gauges and a large inflation shelter were on the ground and the 1,000-foot light for nighttime ceiling measurements with lights at specified distances and landmarks for visibility reporting. The instruments and techniques were so purely simple. In addition to the problems created that season by the weather, the Weather Bureau was to be moved to the front of the other agencies, logical location because that was the only office to which pilots, airline operation employees, and the public came for information. A narrow hallway leading to the Weather Bureau was being eliminated. Prior to the move, the panels and wiring for Air Traffic Control communications were installed in the midst of the weather office, and teletypes were being relocated, creating not to be believed congestion. It was rather overwhelming. No season was ever that difficult, still I considered it the norm.

The duties were as circumstance dictated: Original title - Weather Observer - describes initial and primary duty for reporting hourly observations for transmission by Communications at half-past the hour, on-the-hour checks, and reporting significant changes for special reports and phoning these to the tower. Six-hourly reports were more extensive and their communication resulted in map signals to plot the six-hourly map, a chore everyone seemed to like. Filing reports from the teletype for display so it would create a picture for the entire country was a spare-time activity. Other duties included answering phones for the general public and media; supplying any requests; and assuming any duties for the City Office in the Federal Building located downtown (for their hours of nine to five, Monday through Friday, no holidays), preparing balloon for six-hourly winds aloft report, hoping helium tank did not need changing; launching; recording minute readings, unless with luck you could use headset and give readings to coworkers in the office who would record and begin plotting until they were interrupted by other duties. Everyone had an extra duty from a list of mundane chores that allowed the office to be functional. Happily, radio broadcasts were transferred to Columbia, Missouri, a less busy station, but earlier in my service I did this briefly. This duty required working from 2100 to 0500. Later, punch cards were introduced and completed for designated reports and then sent to Kansas City Regional Office. These were checked and returned for corrections when necessary. Visitors to the station were dealt with, and even school group tours could be a real problem because there was little or no spare time.

The primary shifts were 0800 to 1600, 1600 to 0000, and 0000 to 0800. These shifts were usually rotated each week. There was also 0700 to 1500, 1500 to 2300, 2300 to 0700, and the dreaded 2100 to 0500. Because of the small staff the scheduling was quite irregular and sometimes very inconvenient to the worker, but necessary to cover 168 hours per week. Days off sometimes were not consecutive and I cannot remember anyone using sick leave.

Each shift was scheduled for eight hours; however, you arrived ahead of scheduled duty to prepare to take over the shift and remained until your relief arrived and was able to assume the continuity of the duties of the previous shift, no matter how much time it required. Occasionally

a staff meeting was called; attendance was expected. The work week was forty hours, no overtime was recognized. On one occasion there was such flooding in low-lying areas from sudden rain, my relief scheduled to arrive at the end of my shift at midnight was not able to get through. The earliest arrival was 0700.

This was a very dedicated group for the most part, very considerate of one another. Certainly there were some people you worked with more efficiently than others, but everyone worked hard or the tasks could not have been accomplished. If you were thinking not in terms of long-range career but only in terms of doing the best possible job for the present, it provided a compatibility with those contemplating future advancement. Politics exists in everything in life, in this setting this was minimal.

I left the Weather Bureau in 1950, the official term was voluntary displacement. The erratic hours certainly took their toll. It was time to "get-a-life." The Weather Bureau experience made a great resume. I worked for a short time in the Adjudication and Contact Office of the Veterans Administration and advanced to the Aeronautical Chart Plant, both interesting, located in the city and regular day hours. Soon I married, became a parent and stayed home, for this was 'I Love Lucy' times.

The low point of my Weather Bureau career came early on when I was inexperienced, unsure of myself, wanting to prove myself, adjusting to the scheduling. For the high point, though no one ever adjusted to the hours, acquiring experience and confidence and the general spirit of teamwork cause me to remember the time fondly.

My time of service includes little time prior to VJ Day, but I think my lengthy answers to the other questions cover this more than anticipated.

Getting to the airport was no easy task. Though the Navy Base was south of the field and McDonnell Aircraft was to the north, the only public transportation was the airport bus which ran every thirty minutes when it made the run, at no one's convenience, and not over night. I drove nearly twenty miles from the city during a time when gas rationing was in effect. I was allotted extra stamps. There was cooperation with the other airport employees regarding transportation, but scheduling made this difficult.

Prior to being paid on one occasion, all employees were required to sign a sworn statement declaring that they were not Communists. Thinking about this now, it seems like an unreasonable requirement, but with the preoccupation of getting on with the work, some of us nevertheless appeared before the Postmaster of Robertson, Missouri.

President Truman gave all government employees a declared holiday for Victory Day, a gesture that was impossible for us. Some of the things I describe would only occur during this time. The Navy Base provided all the emergency equipment for the airport. I recall a few times when there was a total power failure throughout the airport. The Weather Bureau kept Coleman lanterns available for this situation.

Would I do it again? At that time of my life, in that time of history--yes. It was work that needed doing, it was a challenge, I learned a lot. Maybe I could have used those years to better personal advantage, but my choices were right for those times.

The major contributions of all the employees at that time was keeping the Weather Bureau 'manned' and assisting in keeping the skylines safe for aircraft. Dramatic phrase? Sure, but that is what we were doing.

I can remember individuals but I cannot recall the number of employees at one time. There was a staff of forecasters located in the office next door with flight service, probably six. These were all men, at least one of whom had been a high school principal. The office in which I worked had perhaps a dozen employees--at the time I arrived mostly women; by the time I left mostly returning male veterans. The chief and assistant were always men.

The pay while I was attending training class was comparable to a beginning female office worker. Upon station assignment there was an increase and periodic increases. Later 10% night differential was added for hours between 1800 and 0600 which recognized the inconvenience and additional pay for holidays. By the time I left my pay since training rate had nearly tripled and while the duties were basically the same, my title, Weather Observer, became Meteorological Aide.

Reminiscing about Weather Bureau years was very pleasant for me. Perhaps it was the times, the work, the hours, that created the camaraderie I remember fondly.

Personal View

of

JEAN C. BROWN DURST

I began working for the Weather Bureau in 1943. My assignments were in Seattle, Washington, and at Sexton Summit, Oregon. I left in September, 1944, to attend college. I worked under my maiden name - Jean Brown.

Before working for the Weather Bureau, I was a high school graduate (physics classes). I learned from a high school teacher that the Weather Bureau needed new employees.

The Weather bureau provided training in specific observation skills. I was impressed with the integrity at the Weather Bureau, and was received as an equal. The morale on station was good.

My duties included the assignment to clear the teletype of hourly reports. Shifts were 'round the clock, twelve hours on - twelve off. We worked forty-eight hours each week. At my duty station there were three women, one man, total. I do not remember what the pay was like during that time.

There were no low points in my Weather Bureau career. Working for the Weather Bureau during World War II was worthwhile and necessary. Would I do it again? Yes. I loved being a weather observer. I feel that reliability was one of my major contributions.

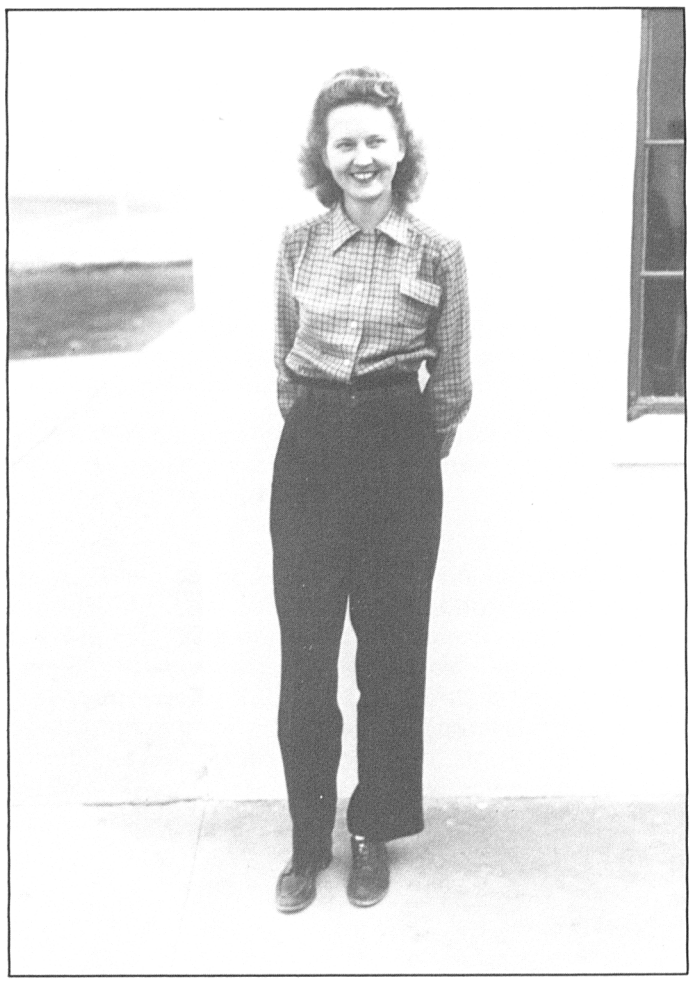
Personal View

of

MILDRED SPRUNG GHOLSON

I worked for the Weather Bureau from August, 1942, to June, 1953. I was stationed at Beaumont, California, and Tucson, Arizona.

I did not know the Weather Bureau needed new employees. I was in Los Angeles and decided to start looking for work at the Civic Center. I started at the top floor of the building. The Coast and Geodetic Survey took my application. The next floor down was the Weather Bureau. They hired me on the spot. I worked for the Weather Bureau because I needed a job and I always enjoyed clouds and weather.



Mildred Gholson

I started working as Mildred Sprung. In 1948 I was married and became Mildred S. Gholson. In June, 1953, I left the Weather Bureau to become a full-time homemaker and to see what it was like to have regular hours.

My previous educational and practical experience were as follows: The Federal Bureau of Investigation hired me to work for them in Washington, D.C. immediately after I graduated from high school. Also I worked for the University of Arizona Extension Service.

When I started work for the Weather Bureau, my pay was approximately $1220.00/year. When I resigned I received around $3380.00/year. The amount varied because of overtime and continually rotating shifts. I went to the Weather Bureau training school at Pacific Palisades, California.

The Weather Bureau employees were very kind and friendly to me. My first impressions of the Weather Bureau were favorable. The office was between Bonning and Beaumont, California. The boss was very helpful. Even found a place for me to rent before my arrival, and met me at the railroad station. The morale on station was usually very good.

My duties were taking weather observations, cutting the tapes and filing weather reports on teletype (no CAA in Beaumont,) filing flight plans, taking PIBALs, plotting and analyzing surface and upper air charts, plotting pseudo-Adiabatic Charts, giving radio broadcasts of the weather, recording climatological data, taking samples of atomic fall-out and sending them to the Atomic Energy Commission, briefing pilots and answering the telephones.

I worked continually rotating shifts. Each day I normally worked nine hours; and 45-54 hours a week. In Beaumont, two other women and one man worked with me. In Tucson there were three women and three men.

The high point of my Weather Bureau career was when I got the highest score in the western United States, Alaska and Hawaii on a Weather Bureau test. The low points were caused by a particular male employee who consistently made himself unavailable to answer phones or brief pilots when I was going off the midnight shift. Since we were required to complete the surface chart, I worked up to four hours of unpaid overtime because I was doing his work also!

Looking back, I feel that the Weather Bureau was an excellent place to work. If I had my life to live over, I would definitely do it again because I truly enjoyed the work. The variety of duties was a big plus and time usually flew.

I believe my major contributions were punctuality, accuracy, conscientiousness, and enthusiasm.

A few of my memorable experiences are as follows:

a) During a severe thunderstorm, a bolt of lightning struck the power line across the street as I started to go outside. Great balls of lightning of various colors tumbled off the line, I was knocked back into the building and struck a metal cabinet. We had an immediate cloudburst and water flooded through the office while I was writing up my observation. (My joints ached for a couple weeks after the incident.)

b) During another severe thunderstorm, I was kept very busy filing special observations when a dust storm severely reduced the visibility. Moderate rain followed and I reported "blowing mud balls" which were pelting the windows. And then we had a cloudburst. Many

light aircraft were torn from their moorings and flipped over.

c) A DC-6 AA [American Airlines] westbound transcontinental flight #211 landed below limits which I was requesting at the time. A CAA inspector was on board monitoring the radio communications and heard the many special weather reports covering the rapidly changing weather conditions. As a consequence, the Captain was fined and severely reprimanded.

d) On another occasion, I was starting the six-hourly 1730 report and spotted a dirigible-shaped object just beneath a 6500 foot overcast at the west end of the Catalina Mountains. It was moving slowly to the WSW. At that altitude, the winds aloft were from the West at 60 mph! I called the Central Tower operator and asked him to monitor it while I filed the weather report. I returned to the roof to watch it. It would disappear briefly into the clouds and then reappear further to the SW until it hovered over the city. I watched it until it got too dark to see it. There was no gondola. The controller called Davis-Northern Central Tower and they reported that there were no known aircraft in that area and they too saw it. Our surveillance lasted 45 minutes. We decided not to report it to Wright Patterson Field, Dayton, Ohio because no one would believe us and/or we would be labeled "kooks."

Personal View

of

KATHRYN C. GRAY

I was an employee of the National Weather Service during World War II. My "War Service Indefinite Appointment" as an Observer SP-3 ($1440 per annum) was effective March 26, 1945. I was employed under my maiden name - Kathryn J. Caskey.My resignation was effective June 23, 1947 ($2320 per annum), when I was married and moved out of state.

I worked at the Airport Station in Houston, Texas. I learned of the vacancy at the Houston Station from my sister-in-law, Anita Corley Caskey, who was employed there. My only applicable background had been an Aeronautical Science Course that included a section in Meteorology, and a Freshman Astronomy, Maps, and Weather Course(Ottawa University).

All of the women on the station had taken a training course in Fort Worth before being assigned to Houston. I think I was the only employee at Houston trained on the station.

There were a total of six employees. The other employees were all women at that time; all were smart, dependable, and dedicated. I was very well received. I was favorably impressed, and appreciated my job from the very beginning. The morale on the station was excellent. Employees were never late, shifts were never missed, and neither were observations.

Our duties included hourly and special aviation weather observations; Synoptic Observations; PIBAL Observations; Map Plotting; Pilot Briefing; and lots of (inquiries) telephone calls. Cloud heights were mostly estimated, but we had a ceiling light to use at night, and ceiling balloons to release and time, during the day. Ellington Air Force Base called in their weather observations, that we filed with F.A.A., as we did our reports, to be transmitted.

We were given tests, (Circular N), before we were authorized to take and sign for observations. We were regularly given eye tests. Inspectors from the Regional Office made inspection visits to the station. They checked on the operation of the station, the observations, and map plotting. All transmitted observations were constantly checked, and employees were charged and signed for errors when detected.

We worked eight-hour shifts, six days a week. Our shifts were: 0000-0800; 0800-1600; 1600-2400; & 0600-1400. We worked 48 hours each week. The pay for some of the grades at that time was as follows: SP-3 - $1440 per annum; SP-4 - $1620 per annum; SP-6 - $2320 per annum.

Our station was not air-conditioned, and always heavily occupied with bugs. They liked to reside on weather maps being plotted, requiring constant bug removal as each station was plotted. Our instrument shelter was located on a deck one floor below our office. Our Pilot Balloon Observations were prepared and taken from that same deck.

There was one rest room to serve three floors of the building. Since it was used by men and women, the instructions (although not always observed) were to lock the door from the hall.

A Tropical Depression - centered to the east of Houston, invaded our observational area June 14-16, 1946. All employees were confined to Station. We lost power, so operated with an extension cord from the F.A.A. emergency power. We used ropes to safely make our way between the building and the instrument shelter, to obtain our observational readings. Our station had a special Hurricane Teletype, but lost its operation as soon as the winds got strong.

The Airport Station at that time was South of Houston. In 1947, Texas City was extensively damaged, when a chemical explosion in a cargo ship in the harbor triggered fifty successive blasts on shore and took more that 500 lives. The blasts could be heard at our weather station. This resulted in a very significant increase in the air traffic for a rather long period of time.

Houston had many Oil Companies with private aircraft. Their pilots would frequent our station, as would the airline pilots, for flight briefings. It was always a very busy station.

I have already mentioned Inspectors from the Regional Office. They were always available for discussions with employees. One day, I had a three-hour "conference" with an inspector. With our Pilot Balloon Observations, we had found what later would be found by jets and then called the Jet Streams. We knew they were there and real, BUT were not allowed to report them, or even retain (that information for) the observational information that was mailed to Ashville, North Carolina. If we mailed in those observations, or reported them, we were charged errors! We KNEW that the wind speeds were really up there, so I was trying to obtain permission to mail in the observations for future investigation. I LOST. The official contention was that strong winds at those heights COULD NOT EXIST. We were told that something was happening to the balloon! We knew better!

It was great experience, and a good way to start my Government Service. My career included service with the Weather Bureau in Denver, Colorado, and Kansas City, Missouri. This led up to my service with the Environmental Science Services Administration (ESSA) and the National Oceanic and Atmospheric Administration (NOAA) in Kansas City, Missouri; Norman, Oklahoma, National Severe Storms Laboratory (NSSL); and Environmental Research Laboratory (ERL) in Boulder, Colorado. Most of my Service time was with Commerce, but I also worked in Agriculture, Defense, and the Veterans Administration. My most important assignment was that of Acting Director of the National Severe Storms Laboratory in Norman, Oklahoma, from September 1975 through January 1976. Would I do it all over again? Probably. Loved the work, but my only reservation was shift work!

Personal View

of

MARY E. COLEMAN HAAS

I worked for the Weather Bureau during the years of 1942 through 1952. Entrance into the Service began in my home town of Glasgow, Montana.

Then in early 1944, I saw a notice on the bulletin board which told of the need for women to replace men who were entering the armed services. The notice stated that there were jobs available all over the United States and also the Territory of Alaska.

A bell went off in my head when I read the bulletin. It had always been my mother's dream to go to Alaska. As a matter of fact she and her best girl friend determined to do just that. They saved their money and started out by train from Michigan to cross the country and then go by boat from Seattle to Alaska. Mother was in her early 20s, it was the turn of the century.

While visiting her girl friend's brother in Glasgow they found the area to their liking. They obtained jobs, even took out homesteads. They decided to settle in Glasgow, ultimately both married and raised families (they never did get to Alaska).

"So," I thought, "here's my chance to fulfill Mother's dream and mine. What an adventure!" I applied for a transfer. Several months later I received a letter back; I was to be an observer in the Juneau, Alaska, Weather Bureau, and I was to go immediately. You can imagine how I felt. When I told my mother she said, "Good! Now you can fulfill my dream."

My schooling up through high school was in Glasgow. Then I went to St. Catherine's in St. Paul, Minnesota, for two years, studying in the field of liberal arts.

When I returned to Glasgow I began teaching a first-aid course. Several of the members of the class were in the army in the Weather Corps. I listened with fascination to their conversations concerning the weather, how they measured and took data, and the use of various instruments. It stirred something inside me. I wanted to learn more. As it happened, there was a night-school course offering that fall in "weather" and I took it. The title of the course was "Ground School." That was my first introduction into the specifics of weather reporting.

I learned that there was to be a Weather Bureau started in Glasgow via a friend of the family. He would take weather reports and send them and occasionally I would go and observe him at his work. I made application to the Weather Bureau and took the required Civil Service exam and passed. Several months elapsed but I finally received notice that I had been accepted. I was one of the original staff of the Weather Bureau in Glasgow.

Before actually reporting to work I was sent to Seattle by the Weather Bureau for training. It was a two-month intensive program consisting of studying the Circular N Manual in its entirety, and practical training. We learned to take readings of the clouds; temperatures; we computed the humidity, learned to read the barometer, and to use other instruments. We were exposed to maps and weather charts and learned how to plot them.

As an actual member of the first staff of the Weather Bureau I felt very good. I was well received and treated as an equal. I was glad to have the job, proud to be learning something new. The two years I worked there were good ones. The job was a challenge; I had the feeling of doing something important and very responsible.

My duties were the same both at the Glasgow and the Juneau station. I would take Radiosonde Observations and PIBALs twice a day. I read the temperatures, computed the humidity, measured the precipitation hourly and recorded these via teletype.

There were a lot of pressures not only because of the need to be accurate, but there was the additional pressure of placing the report onto the teletype in the allotted time spot. There was just about a ten-second time interval allotted for each Weather Bureau to place its tape. Sometimes other bureaus would jump into our allotted time. If a report was missed we would file a late report, but it was the shame of the Bureau if one did.

Both in Glasgow and in Juneau there were three shifts so that there was 24-hour coverage. There was the 8 [AM] to 4 [PM] shift, 4 [PM] to midnight, and midnight to 8 a.m. We worked each shift for one week, then when we returned to work after two days off we would be on the next shift.

Most of the time we worked 40 hours a week, 8-hour days, unless we were shorthanded, which happened frequently in Alaska.

As for morale, it was excellent at both stations. In Alaska we really got along well, even to socializing after working hours. Many friendships were formed, and I still correspond and exchange visits with three Juneau staff women. I married a fellow staff member, Maurice Haas, who was our bureau's meteorologist.

I left the service in the Fall of 1951. I was pregnant with our first child. There's quite a story behind my resignation. The day of my submitted resignation I was on my way to work in a blinding snowstorm. I had the second shift and was on my way to relieve my husband but I never showed up.

I had slid off the road into a ditch in the snowstorm. The terrain was a shear drop off on one side and very rugged, mountainous terrain on the other. Fortunately, I had slid in the direction of the mountainous side.

When I didn't show up for work my husband came searching for me. When he found me he was so upset he insisted that I send my resignation in that very day! That's what I did rather than giving the Bureau the prescribed two-week notice.

High points, well, there are so many. First, I met my husband while working for the Weather Bureau in Juneau. He was on the staff, a meteorologist. We met, courted and married one and a half years later. I became an Alaskan! That in itself was a real adventure, and I fulfilled my mother's dream. I had a good job, a career, good pay including a paid vacation.

I can't think of any real low points, maybe wrestling with the helium tanks and those awful times when I missed

placing the report into the teletype on time. I remember to this day (and that was 38 years ago) the pressure of inserting that report into the teletype.

As to working for the Weather Bureau during the Second World War, every transmission was sent out in the current International Code; of course we received and had to decode every received message and report. There were decoding books the size of phone books and the code and the books changed periodically.

This was about the only indication of security as we weren't required to carry I.D. cards nor was there any evidence of the Military at the Bureau's station.

In Alaska there was very little rationing, no coupon books, no rationing on gas or cigarettes or shoes. I believe this was because at that time Alaska was still a territory, plus the low density of population.

Would I do it again? Yes, of course I would. It was a wonderful experience, especially for women who were interested in a career. There was not much for us but defense work, so that my having had training in the field of weather allowed me a wonderful opportunity. Then going to Alaska, working under those climate conditions, which I had never experienced before. I felt like a pioneer going to Alaska. All my life, actually, I had lived what I call a "pioneer type" of life. My family went on outings together, we hunted together, fished together. So outdoor life was my preference to living in a city. So in Alaska during those years at the Bureau and thereafter I felt I had carved my niche.

That I was replacing a man who would go into the armed service was definitely a plus. I was very involved in my work. I always tried to do my very best while working. The staff, by the way, at the Juneau office was just about an even ratio, male to female.

My name was Mary E. Coleman when I was employed by the Weather Bureau.

My salary in Glasgow was $1,420.00 annually; that is, a little over $100 a month. When I went to Alaska I received a raise to $1,620.00 a year, and I thought I had the world by the tail.

For comparative prices I remember my boat fare, which was five days and included meals, was $65.00. My part of the rent for a shared apartment (with one of the other Weather Bureau girls) was $35.00. Each of us paid about $30.00 a month towards groceries and we ate well!

The weather conditions in Alaska made working conditions at the Bureau a challenge every day. If there wasn't a blinding snowstorm then it was the torrential rains, or the black ice which caused, more than once, a van-load of us to reach the station late, or, it was the intense sunlight. I remember one time getting so sunburned taking observations that I had to go to a doctor - I swelled up so badly.

The black ice was always a hazard. And talk about learning to cooperate. The day-shift employees would meet in Juneau, and we would drive out together to the station in the van. I can't even recall how many times we had to get out and push that van until we could get traction. Slipping and sliding on those roads became second nature to us.

Then there was the time I was on duty when we had an earthquake. The weights in the windows rattled, the overhead lights started swaying, and the ground shook. The tremor only lasted for about 30 seconds, but while it was shaking I thought, "Oh, isn't it ever going to stop?" That was my first earthquake.

Coming from the prairies of Montana, I had perhaps been rained on not more than six times in my life, so when I got to Juneau and there was constant rain, I decided that this was one of the few places in the world where one could live under water. We even went on picnics during the rain as the forest areas abounded with covered shelters specifically built for that purpose.

We even built our house in the rain, and when we would hit the nail into the board the water would splat on our faces.

Those are just a few of the many experiences I had while working at the Bureau. You couldn't imagine what it was like working in those weather conditions, but the staff made it worth while; we all got along so well, we were one big family.

If I were to sum up my feelings regarding working for the Weather Bureau, I guess that was it, we were one big family. We looked after one another and we were very close, probably because of the dangers we all faced daily going to and from work.

I'm glad I had this time to reflect on those forty years ago and glad to share those memories with others.

Personal View

of

ANNA (ANN) EASTERLY HALTERMAN

From 1942 until November, 1946, I worked for the Weather Bureau-- first at St. Louis, Missouri (Lambert Field), and then Wichita, Kansas. I had two years of college and was studying to be an airline radio operator at the time. The Weather Bureau contacted the school and asked if any of the students were interested. I began working for the Bureau because personnel were needed and I felt it would be an interesting career. At the time I worked for the Weather Bureau, my name was Ann Easterly. I left the Bureau in November, 1946, to be married.

I had on-the-job training to be a weather observer. My duties were to draw weather maps, take hourly readings, answer phones, answer questions for the pilots, and do anything that needed to be done. I worked all three shifts. There were approximately twelve other people at my duty station. We worked eight-hour shifts - forty hours a week and sometimes more if needed - depending on the weather.

There were no problems with the other Weather Bureau employees. The best I can remember, morale on station was good--we knew we had a job to do and did it. I thought that working for the Weather Bureau during World War II was a very interesting and rewarding job--at the time I left, radar was beginning to be used. I would choose to do it again because it's never dull. It was interesting work. One reason I liked it was it was always different, there were no two days the same. The weather was always different. I feel that one of my major contributions was standing shifts alone, when no one else could get to the station.

Twice the Flying Tigers needed ballast for their planes. After shifts I went with them a couple of times. Surviving as ballast for the Flying Tigers was one of the high points of my career. The low point was when there was snow and ice on the steps to the temperature shack; I missed the top step and slid all the way down and injured my back--I still have trouble with it after all these years.

When we were on duty at Wichita, Kansas, the wind would blow constantly and we had trouble sometimes getting the weather balloons to stay aloft and sometimes candle lites would go out and we would be unable to track them.

Personal View

of

GRACE D. HARDING

I worked for the Weather Bureau from May 1943 to June 1946; and from July 1958 to March 1959. My assignments were at Boeing Field, Seattle (temporary assignment), Bethel and Juneau, Alaska, and Great Falls, Montana. I became pregnant in January 1946, and in those days it was almost unheard of for new mothers to return to work, so I stopped working for the Weather Bureau in June 1946. I had been at Bethel for two years and Juneau for one year. I later filled my husband's observer position at Great Falls while he attended school.

I started with the Weather Bureau as a means to be with my husband who had been transferred to Bethel, Alaska. At that time entry into Alaska was restricted to those who had employment - generally defense related. Through the grapevine in Alaska my husband, Warren, had learned that the Weather Bureau was bringing in wives of observers to work at the stations. The outlying stations were all short of personnel. Some of the work was being done by the military.

My education and experience had all been in the secretarial - accounting field. I had experience working with numbers which was helpful.

I spent one month at the observer training school in Seattle. From there I went to Boeing Field for on-the-job training. I was in Bethel two and one-half months later where I continued to learn while on the job.

The Weather Bureau in the 1940s was small, scientific, efficient, and appeared well organized. The employees were very dedicated and proud to be a part of the service. The regional office, forecasting unit, observation station, and hydrology all shared a portion of the second floor of the terminal building at Boeing Field. By today's standards it would be considered an impossible situation. However, it seemed to work very well.

At Seattle, the observer not only did the weather observing, but plotted maps as well. At Bethel, which was a radiosonde station, our only duties were observing. No maps were plotted. At Juneau women were hired whose only job was to plot maps. So I was solely observing there, as well as at Great Falls.

We rotated around the clock working eight hours per shift. The shifts were scheduled to fit the observation schedule. We worked six days (forty-eight hours) per week.

I started in May 1943 as an SP-3 with a salary of $1440 per year. I was raised to an SP-5 before I stopped working (rate unknown). In Alaska we were given a 25% pay differential to compensate for the high cost of living.

The number of observers varied from five to six depending upon the availability. Most of the time I was the only woman, although another couple (husband and wife) were there a short time. The CAA, which was next door to us, had about the same number with two woman communicators.

Everyone was very friendly and helpful. I felt the seasoned male observers had some reservations about my ability, but they were cooperative. Being female in a 98% male situation helped to break the ice.

With the exception of Bethel, morale at all stations was good. The weather station and housing were located adjacent to runways built for Army Air Corps. We were across a very deep and wide river from the town of Bethel where the population was comprised of Eskimos, Indian Affairs personnel, a Moravian mission, and white traders. Our housing was adequate, but the food supply was of such poor quality that it took a toll on everyone's health. The bachelors especially dreamed of "city lights." Everyone was a long way from home, there were no vacations and "R & R" had not been invented. Everyone realized that it was war time and tried to make the best of it.

The high point of my career was the day I took off from Seattle enroute to Bethel which was my first full-time assignment. The low points were the days when we received word from home about the deaths and injuries of family members and friends due to the war. Although we were anxious to get mail, we feared what the news might be.

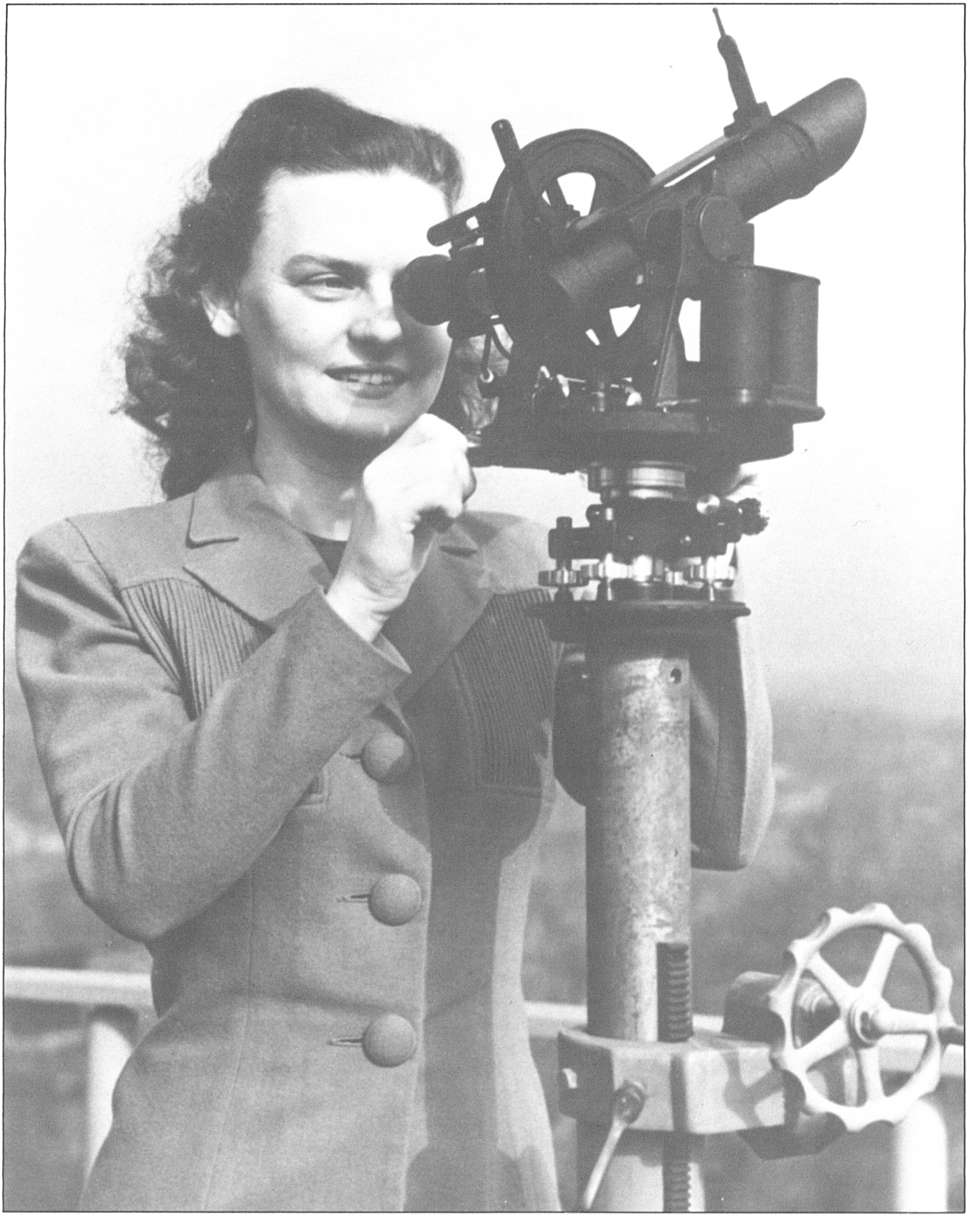
My impression of working for the Weather Bureau during World War II was one of lots of excitement mixed with many days of boredom and homesickness. I would certainly do it again. Not only do I feel I contributed to the war effort, but I travelled to new places, gained valuable work experience, and made friends I will never forget. By my filling a position at a remote Alaskan station, some other observer was freed to go where I could not have gone.

The most exciting event which occurred while we were at Bethel was the finding of one of the mysterious Japanese incendiary devices with the attached balloon and gear. A native found it out on the tundra a few miles from our station and brought it to the state marshall who, in turn, brought it to the weather station. At that time no one was aware of what it was or what its purpose was. We were certain it had Japanese origins. We later learned many of these had been found along the west coast. They were never a serious threat.

We lived and worked on the edge of the runways built to handle military planes. Therefore, the random coming and going of many different types of planes was exciting and interesting to us. The amount of traffic was small, but there was enough to create some emergencies.

One night while the crew of a B-26 was across the river enjoying a night on the town (at the roadhouse), a sergeant who was familiar with the plane slipped back, entered the plane, started the motors and taxied to the end of the runway. He then asked in a very intoxicated sounding voice for permission to take off. His plan was to take the plane out into the tundra and land it, hoping to spend a few more days at Bethel. After spending some anxious moments, the communicator talked him into coming back to the station. We were concerned that he might hit our quarters, but he made it back without further incident.

Inflating a Pilot Balloon.



Tracking a Pilot Balloon.

Plotting a Pilot Balloon run.

Personal View

of

KATHRYN M. HIGHBERG

Editors' Note – These remembrances are of necessity written by Kathryn's husband, Walter Highberg, since Kay has been progressively more disabled for several years with Parkinson's disease.

When it became increasingly obvious in the months after Pearl Harbor that men were being lost from Spokane's Weather Bureau Office due to transfers and promotions, as well as fulfillment of military reserve obligations, Kay scouted the idea of working in the Weather Bureau.

Her husband, Walter, who had been employed in Spokane since early 1941, broached the subject with the MIC. After checking with the Regional Director in Seattle, the idea was quashed so Kay took a job as a "Rosie the Riveter" at an Air Force base near Spokane.

In 1943, Walter was transferred to Glasgow, Montana, to assist in setting up a new RAOB station. Kay was fascinated with her job at Spokane repairing war-wounded B-17s and wanted to remain in Spokane until her husband had settled into the new station's routine and, incidently, had found proper housing.

Sometime that summer, the Spokane MIC asked Walter whether Kay would like to join the crew at Glasgow. It seems that the bias against a man-wife team was ended. So Kay and Walt became the first man-wife RAOB team in the old Seventh Region, if not in the nation.

Kay was duly inducted into the Bureau – joining three other young women and three men. She fell readily into the routine and became increasingly fascinated with her work. Her previous college studies, with an accent on geography, had prepared her for map spotting and analysis.

Kay and Walt and their three-year-old son had finally moved into a converted henhouse about six blocks from the station. Child care problems were solved with a part-time grandmother type or by the oncoming crew member walking the boy to the office and delivering him to the off-going spouse.

The Glasgow office was situated on the second floor of a bank building. The balloon inflation building was on the roof, along with the PIBAL platform, thermometer shelter, and a couple of runways for launching the radiosonde balloon. With the onset of winter, balloon releases in the more frequent strong winds became more hazardous and more frustrating. An eastern Montana winter, with temperatures well below zero and gale-force winds blowing dust from the snow-free terrain, convinced Kay that there were better places to be for a weather gal even if it was in arctic Alaska. Her researches of weather and climate data convinced her that McGrath, in central Alaska, would be suitable, so she and Walt applied for transfer and were soon accepted.

So, some time during the night in early July of 1944, the Highberg family left Glasgow on their new adventure. It started uncomfortably for the train was chock-full. The conductor found a vacant space for the youngster and a pair of camp stools for his parents. After stopping off at Spokane for a week or two of leave, the family set off for Seattle to go through the red tape necessary to get to Alaska, which was still designated as a war zone, although the Japanese had been thrown out of the Aleutians more that a year before.

Travel up the Inside Passage on the S.S. Alaska was stimulating, but restful, although passage across open water in the Gulf of Alaska necessitated blackout and restrictions on radios. A Navy crew on board manned a gun and a depth charge thrower in this area. After a one-day stopover in Anchorage, the Regional Office, they were on their way to McGrath.

Their plane, a Lockheed Vega, was jammed with freight, two Eskimo ladies, and the Highbergs. The two Eskimos had cartons on their laps, Kay held the boy and Walt cuddled a 50-pound tractor bullgear. After tossing back a few "urp-cups" to his laden passengers, the pilot roared down the runway and banked sharply, heading for Rainy Pass through the Alaska Range.

McGrath, situated on a meander loop of the Kuskokwim River was almost entirely surrounded by the river, with the three ends of the T-shaped runways nearly at the water's edge. The CAA community consisted of ten houses, four occupied by Weather Bureau people, four by CAA communicators, and two for maintenance personnel. A long structure contained the Weather Bureau office which adjoined the CAA communications facility. Other structures included warehouses, commissary, utility buildings and garages. A few hundred yards away was the "business district" – Quonset post office, two roadhouses, a Northern Commercial Co. store, and a few scattered houses.

Situated strategically at the intersection of the Anchorage-Nome and Fairbanks-Bethel airways, McGrath's 24-hour surface and upper air observations were crucial to the safety of the Russian airmen who ferried U.S.-made fighter planes from Fairbanks to Nome and across to Siberian air bases.

Kay could scan surface hourly reports and visualize both the general weather patterns and their evolution, with more precise evaluations of routes and destination airports. Many bush pilots would ask for her particularly by name. Several took her on familiarization flights.

About a month before VJ Day, Walt took over as Official in Charge and Kay unofficially was oldest hand. Personnel changes in the next two years were frequent

as some wanted to return to the States and others mustered out of the services were looking for civilian jobs. With four houses to accommodate seven employees, one solution was to install three bachelor girls in one house. Kay was their unofficial Big Sister.

Summer of 1947 saw the end of Kay and Walt's commitment to a three-year contract of Alaskan service - Kay's resignation was accepted and Walt's request for leave without pay to return to school was approved.

Kay's memories of her four rewarding years in the Bureau continued through the years while her husband had duty in Fairbanks, San Francisco Forecast Center, Los Angeles Forecast Center, and his last 18 years at Spokane before retirement. In 1979, her book, "Orchard Prairie, the First Hundred Years," was published and quickly sold out its press run. In 1989, Washington State's Centennial Year, Kay was honored in the State's Centennial Farm awards for living on a farm which had been in her family's possession for over a hundred years.

Personal View

of

CHARLOTTE SCHMIDTKE JONES

I worked for the Weather Bureau from March, 1943, to approximately June of 1949, with a break of approximately three months in about 1945 while attending the University of Washington. I used a different name part of the time - I married in 1949. I left in 1950, just before my first child was born, to become a full-time at-home mother.I returned to the Weather Bureau in August of 1969 and stayed until March of 1986,at which time I was eligible and took retirement at the age of sixty.

After the ten-week training session, my work stations were Sexton Summit or Sexton Mountain, Oregon; Boeing Field, Climate Office, Federal Building, Lake Union Building, and NOAA at Sand Point, (all forecast offices in Seattle).

I learned that the Weather Bureau needed new employees from an article in a ladies magazine - I don't remember the name. I always found the weather fascinating and the weather people I worked with were my kind of people.

I was seventeen years old and a Senior in high school when I started with the Weather Bureau. I had very good grades. My brothers and I had a wind vane and thermometers and watched the weather regularly.

My annual salary, after the year's probation, was $1440 a year.

Our training was excellent. We learned basic weather dynamics - charting - radiosonde, and PIBAL observations and aviation surface and synoptic weather observations.

Wherever I worked I was welcomed and made to feel at home. My first impressions of the Weather Bureau? It was a long time ago - but the main thing I remember is how fascinating the different weather jobs were - Ocean weather observers, fire weather - radiosondes and PIBALs. At that time weather observations were also vital to the growing aviation business. Morale was excellent wherever I worked - for the majority that is. There are always one or two poor sports.

At Sexton Mountain my duties were hourly aviation weather observations, six-hourly synoptic observations and climate; at Boeing Field I took hourly aviation observations and six-hourly, made pilot balloon runs, plotted upper wind and radiosonde charts, and gathered climate data; at the old Federal Building (Forecast Office to Sand Point) my duties were charting and radiosonde plotting, collecting and disseminating river data.

We lived on station at Sexton and worked mainly twelve-hour shifts. It was a three-mile hike to the road. Otherwise I worked primarily rotating shifts - days - swing and midnight. Normally I worked an eight-hour shift - except for Sexton. Weekly I worked forty hours. On a few occasions, because of illness or other emergencies, I worked two shifts - sixteen hours.

The high point of my career was receiving a Bronze Medal Award. The low points were trying to do a good job while going to U. of W. and working steady graveyard shifts.

When working for the Weather Bureau during World War II, primarily the senseof teamwork impressed me. There was a mutual support system and most of the men had been in the service and were pleased to have women on the staff. There were some (few), of course, who could hardly wait to see us go. Because of the caliber of women hired, there was very little (if any) backbiting, talebearing, or bad-mouthing of anyone.

Would I do Weather Bureau work again? Yes-yes-yes. I can honestly say that in my twenty-three years there were very few times that I didn't go to work with a good feeling of looking forward to fascinating weather situations. I also worked with delightful people.

My contribution always was that of a woman - I never wanted to be a man. I was fully qualified technically for the job and I added the woman's touch - diplomacy, never retaliating for any reason, putting the product ahead of my ego and just doing the job.

At Sexton Summit (Mountain), it was fun to see all the animals - deer, squirrels, porcupine, and skunks. Nothing is quite like shooing a skunk away from the instrument shelter or hiking up the mountain around 11 p.m. and going very carefully when you hear the rattle snakes doing their thing.

One hot day a brush fire started in the valley, jumped the highway and was about one-fourth mile from the station when it was brought under control. We were within 15-20 minutes of being evacuated. We fed the fire fighters a splendid meal and then were quite short of supplies until more could be brought up.

Another interesting night I remember being called a crumby little "bobby soxer."A young 1st Lieutenant was complaining to the forecaster that I had closed the field due to low ceiling and he couldn't take off. The forecaster backed me up all the way so the young man curled up on an unused desk and slept the night away.

Personal View

of

MILDRED M. LAITNER

I began working for the Weather Bureau in 1943 at Lambert Field, St. Louis, Missouri. My practical experience had been flying small aircraft. I had learned that the Bureau needed new employees by using their service. I went to work for the Bureau because I had become very interested in weather while flying locally, and there was a need. I started work using my maiden name – Laitner. In 1949 I married and left the Weather Bureau.

The training that the Weather bureau provided was mostly on duty. I was received very well by the other Weather Bureau employees. My first impression was that the work was interesting. Morale on station was very good.

My duties were those of Observer. I worked fairly regular shifts, both day and night. There were about 20 people at my duty station. We worked eight hours a day, forty hours a week. The pay in 1948 was $3351.00

I would choose to do this type of work again. It was a vital service for military and civilian pilots. Because of the war there was more need for meteorologists. I feel that one of my major contributions was being as quick and accurate as possible.

Personal View

of

MARY EVELYN ROSS LUCKE

I began working for the Weather Bureau in January, 1944, at Havre, Montana. At the time, I used my maiden name, Mary Evelyn Ross. I had learned by word-of-mouth that the Bureau needed new employees. I went to work there to do my bit for the war effort -and to earn money for college.

My previous experience included one quarter of college, and I had worked in a department store and a bank. I left the Weather Bureau in January 1946 to return to college.

The Weather Bureau provided on-the-job training in reading instruments, typing and measuring clouds, measuring winds aloft, and plotting maps. The boss and four female co-workers were the other personnel at the duty station. The morale on station was good among the "girls." The boss was an old "fuddy-dud" and quite "macho," even though he was effeminate. As near as I can remember, I started at $130 a month after leaving a bank job that paid $70.

My duties consisted of hourly reports, PIBAL runs, and weather maps (my favorite job). I worked eight-hour shifts - day (8:30 [AM]-4:30 [PM]), evening (swing), midnight (12:30-8:30). We normally worked eight hours a day, 40 hours a week. The last few months I worked, we had an 8 [AM] to 6 [PM] shifts with a two hour lunch. I worked night shift with no days off because the two new girls weren't experienced enough to work alone.

I don't really know what would be the high or low points of my Weather Bureau Career. My first impression of the Bureau was - I liked it! I really liked the work. Would I do it again? Yes, because I learned so much and it was fascinating. I feel that my major contributions included being efficient and doing excellent daily maps.

Interesting experiences included the time I stayed on the roof tracking a PIBAL for 50 minutes when the temperature was -30. I couldn't move my fingers for quite a while.

Another time, I recorded a rather fierce thunderstorm which "hit" at 3 a.m. The boss, on arriving at 8 a.m., chewed me out for making such a mistake because Great Falls hadn't had a storm first. According to him, all weather came from Great Falls. After I showed him the map and the frontal system, he calmed down.

Personal View

of

ESTHER H. LUDWIG

I worked for the Weather Bureau from 1943 to 1950, seven years in Tucson and six months in Flagstaff. My starting salary was $1440.00 per annum. I first learned of the opportunity through the local employment office. At the time, I had to reenter the work field because my husband was ill and my son was in high school. I left the Weather Bureau in June, 1950, at which time I was replaced by a veteran returning to Flagstaff.

Esther Ludwig (1947)

My experience before working for the Weather Bureau included high school and some college; part-time work in a credit department; and teaching at an elementary school for five years. The training provided included three months of meteorology study and supervised training on the job.

I was received enthusiastically by other Weather Bureau employees. I was impressed with the dignity and intelligence of the director -and his respect for women! The morale on station was excellent. Everyone was dedicated to their job. There was good rapport.

My duties included regular eight-hour duties - half-hour, hourly, six-hour reports - answer phones - give information to public - radio stations. The shifts were: Eight o'clock a.m. to 4 p.m. - 4 p.m. to midnight - midnight to 8 a.m. I worked eight hours a day, forty-eight hours a week the first year, forty hours thereafter. At my duty station, there were seven women and three men at various times - always two on a shift.

One of the high points of my Weather Bureau career probably was seeing secret flights landing in the dark of night. The low point definitely was being replaced!

Looking back, my impression of working for the Weather Bureau during World War II is that it was exciting and informative. We were a part of history. I would do it again if time, age and conditions existed. I feel that my contributions included perfect attendance and the ability to work well with other employees. I was eager to learn and had excellent phone rapport.

Flagstaff was full of experiences - locking myself out of the office at 2:00 a.m., twelve inches of snow on the ground - alone and miles from anyone. A high heel and glass door enabled me to break the glass - reach in - unlock - and get the report out on time!!

My interesting experiences include being privileged to be the first woman in Arizona to give live radio weather reports from the station and gaining friendships that have lasted to this day. In my work I still meet people who recognize my name - and my weather reports.

Personal View

of

MAUD G. OGILVIE

I began working for the Weather Bureau on June 13, 1944, in Lander, Wyoming. I needed employment and was informed there was an opening at the Weather Bureau, so applied and was hired. I had one year of college, but no work history. At the Weather Bureau, I always used the same name, except I have a nickname that some employees called me - "Bunny."

I heard about the opening from a friend who was being transferred to Anchorage, Alaska, and she suggested I apply for the opening. The training I received was on-the-job training for weather observations and also studying Circular N. The first month I worked was the midnight shift taking hourly observations. I started on other duties as time permitted. I was always received in a very pleasant way by all personnel during my employment with the Weather Service.

My first impression was that it was a very complicated position, but challenging and interesting. I felt by studying and help from co-workers I was willing to try to make a success of the employment.

The first year I worked with three other women and the Official in Charge. Our duties were mostly hourly observations, which were telephoned to Rock Springs, Wyoming, to be transmitted, as we did not have a teletype at that time for transmitting the weather information. Also did necessary reports and gave information concerning weather to local people by telephone.

In mid-1945 the Radiosonde was installed. I was trained for that program, which was very interesting. At the time I went to work at the Weather Bureau, the office was located on the third floor of the Federal Building, where all observations were made from the roof. When the Radiosonde program was installed, it was necessary to release them from the ground, an adjacent building was used for inflation. During high winds at time of release we had difficulty releasing due to wires, etc. The town of Lander decided to erect a new building at the Airport for the Weather Bureau. In May, 1946, all equipment was moved to the new location. It was a great improvement for releasing the Radiosonde. A teletype was installed so all messages were transmitted directly from the station.

There were four women and four men employed to cover the shifts after the Radiosonde program started. The three women [with whom] I started working resigned at the time of the Radiosonde program so three more women were hired to replace them.

The Weather Bureau remained in that location until September 20, 1973, when moved to another new building near the old one.

My work consisted of all shifts to cover the work. I worked forty hours a week with eight-hour shifts unless necessary to work overtime. My starting wage was $56.00 every two weeks.

I always felt the morale was very good as all employees were very congenial to work with.

I resigned from the Weather Bureau on April 13, 1951, the reason being that I was having physical problems with shift work. The shifts had to be rearranged from the regular shifts because of a shortage of personnel.

I cannot say I contributed a great deal, other than I tried to be a congenial worker, doing my duties, being on time and willing to do more when necessary.

It was a most enjoyable time and work was very interesting. I met many interesting people, which I still have contact with since leaving the Weather Bureau. The only low point was having to leave because I was unable to continue the shift work. It was a wonderful experience which I enjoyed greatly, and I would certainly do it again because of the interesting work.

Editors' Note - With her report, Ms. Ogilvie included a copy of a very interesting newspaper report by the Wyoming State Journal, dated May 30, 1946, which tells of the move to the new building at the Airport. Following are excerpts from that article which describe the new facility:

> First observations at the new location were made Tuesday evening. The Weather Bureau now occupies a building especially built for the service, and from that building will be taken the radio-sonde observations, as well as data which has been gathered from instruments here for the past 65 years. Sometime soon there will be installed a radio direction-finding apparatus that will chart even more detailed information on upper air currents. It was to accommodate this latter installation that the new quarters were necessary.
>
> The new building was built by the town of Lander and has been rented to the Weather Bureau. The building is complete, except for the installation of water and gas service. Temporary facilities have been installed in order that the Weather Bureau can move. A fuel oil stove has been installed to serve until the gas line can be laid to serve the building. Drinking water is hauled to the building from down town. A semi-modern-two-holer provides temporary sanitary facilities.

Personal View

of

BESSIE BERGMAN PAUL

I was employed by the Weather Bureau from November 9, 1944, until June 26, 1981, with about a year and a half off - when I was released through a Reduction in Force (RIF) - the last half of 1953 and all of 1954. I worked for thirty-five years at Billings and one year at San Francisco.

Until December 1, 1949, I was Bessie M. Bergman. At that time I married Theodore E. Paul.

Why did I work for the Weather Bureau? It was probably in the genes. I was exposed to the needs of weather observations and forecasts at a young age from my father's association with aircraft, airports and airlines. He opened the airport at Lewistown (LWT), Montana, for Inland Airlines which had just changed its name from Wyoming Air Service. We lived at the airport there, and my father passed a test to take weather observations which he transmitted to the Billings Weather Bureau (it might have been considered a conflict of interest at the time.) At any rate, because I was interested in the weather observations, Dad taught me how to estimate wind direction and speed from a "wind sock." I also learned to read the "altimeter" from the "Kolsman" barometer. It wasn't called altimeter then, we simply said Kolsman. This was the pressure reading given at the time for aircraft landings. I also learned how to read a thermometer for current and maximum and minimum temperatures. As my Dad was the official weather information person for the city of Lewistown, the whole town called the airport to find what the temperature was, be it hot or cold. We had an extension of the office phone in our living quarters and the entire family would take turns answering the phone when Dad wasn't available or the office wasn't officially open. I remember answering the phone one evening when it was quite cold and receiving a request for the current temperature. I replied, "minus eight" only to have the additional query, "Is that above or below zero?"

Before starting work with the Weather Bureau I was a high school graduate with four full years of mathematics including College Algebra. I also had four full years of science including General Science in Jr. High and biology, chemistry and physics in High School.

As a result of my excellent grades, particularly in the foregoing subjects, I was offered a scholarship in Pharmacy at the University of Montana in Missoula. I decided to see if I would like drug store work so I applied for and obtained a position at what was then Bennett's Drug Store (1944.) It was while working there that I learned that the Weather Bureau needed new employees. While on shift one day at Bennett's Drug Store, a gal whom I knew from chemistry class in school came in to cash her check. It was a government check for about $125. We got to talking, catching up on what had happened since graduation and life in general. Just before leaving, she said to me, "Hey, Bess, you like this kind of 'junk' that has a lot of math and science in it, why don't you come up and apply for a job? They are hiring now." Needless to say, I was up at the airport to secure an application form the next day. The $125 was an incentive, also, as I was only earning $50 a month at Bennett's.

The Weather Bureau provided excellent training. I, of course, had on-the-job training. The Head Observer was a former school teacher, as were many Weather Bureau employees at this time, and she had constructed an outline to be used as a study guide for Circular "N". I really feel it was the Head Observer who started me off with the right attitude toward my work. She set such high standards and instilled in me such pride in the work I was doing and a deep sense of loyalty to the Weather Bureau and "My Country" that carried through for me until the day I retired.

My acceptance by Weather Bureau employees was outstanding, especially by the observers. A few of the forecasters were a little stuffy and much impressed by their P-ratings. I, of course, had an SP-rating when I started working and there was a sense of a caste system between P and SP employees. I think I was a little in awe of all the goings on, but I was impressed by the precision, competence, and intelligence of the people who were later to become my friends and cohorts. The morale on the station was very high, superb, in fact.

My primary duties were to take and record weather observations, which were statutory regulations as far as the Weather Bureau was concerned. I also took PIBAL observations, answered phones, sent ceiling balloons, typed forecasts and sent them over TWX and Western Union. I changed the charts on barographs, thermographs, and rain gauges to mention a few. I checked the water each week in the batteries of the triple register. One fun thing and probably why the female employees were encouraged to wear slacks; we climbed the 33 or 34 foot pole atop the Ad Building on which was perched the anemometer to read how many miles of wind had blown by Billings every Monday morning at 9 a.m. We changed the 75 pound helium tanks when necessary, we changed the ring setting on the sunshine gauge in season, you name it, we did it, because that was part of the job.

In 1944, Billings was a forecast center and we had an administrative staff plus forecasters and observers. The forecasters and admin employees were all men except for the secretary. The observation staff was all female. Out of twenty five people, I suppose about eight were female.

I entered on duty as an SP-3, November 9, 1944. This was the year I graduated from high school and I was 18 years of age. My salary was $1440.00 per annum and we were paid once a month. We did a little better than this as we got some overtime on those 54-hour weeks. I felt like I was very rich because I had almost tripled my wages from the drug store.

I was on rotating shifts. We worked six weeks at a time on the same shift. We had a variety of shift beginnings and endings. The hours were mainly set up to handle the synoptic and PIBAL observations smoothly. Particularly the PIBALs, because two people on PIBALs ensured a

speedier run for plotting and encoding. Mainly I worked 8 and 9-hour days. We routinely worked 48 and 54-hour weeks.

The high point in my career other than when I was first hired was when I passed the test for GS-7 and was allowed to remain in Billings as an observer-briefer when the Forecast Center moved to Great Falls. This was April 1, 1953.

In working for the Weather Bureau during World War II, I felt patriotic and important. I felt I was very much a part of the war effort and felt very good about it. Yes, I would do it again! I believe it was my destiny and I was born to do this type of work. I truly enjoyed my work and the time I worked was gone before I knew it. It seemed much more like days than years that I worked, even considering I worked shifts.

I feel that by my work I proved that women were just as capable of doing this job as men. In fact, more capable in some cases. I also, at the time, released a man to go fight at the front and this was part of the hype of going to work for the U.S. Government at that time.

Personal View

of

BETTY J. REO

In the spring of 1945, I met a friend that had just completed training as a weather observer. When I inquired about her training, she told me that the Weather Bureau was hiring women to replace the men that were going off to war. It was then I decided I would also like one of the positions. I went to the Federal Building in Kansas City, filled out an application, took the entrance exam and was accepted into the war service training program.

The training began with a three month course in meteorology. A professor from the university of Kansas City would lecture on certain days and on other days we were detailed to the municipal airport for observer training.

At the end of the training period I was given two choices for a duty station. One station was Norfolk, Nebraska and the other was Washington, D.C. I chose Washington as I thought it would be an interesting place to be during war time. My duty station was located at the analysis center in the northwest portion of the city.

I had hoped to be placed at Washington National Airport, but there were no observer positions available at the time. The duties were varied, but I mainly worked as a chartist. Most of the employees were young girls like myself and we worked rotating shifts of forty hours per week. The salaries were very low in 1945, and the usual starting salary was $1700 per annum. Trying to live in Washington on such a small salary was a challenge. We all lived in a boarding house near the office and two meals a day were provided with the rent. For the record, my name at that time was Betty J. Madison.

After two years, I decided I needed a change and transferred to the daily map unit. During the night shift, we prepared the daily map for publication. On the day shift I would pick up the printed map at the office and travel to the U.S. Capitol Building. There I would draw the current weather map for the senators and the House of Representatives.

After five years with the Weather Bureau and the war had ended, I married an Air Force officer and decided to leave my position...I resigned in June of 1950.

After raising my family of three children, I decided to return to the Weather Service in 1970 and was reinstated at the Los Angeles Forecast Office as a meteorological technician. For a while I worked weekends as a relief observer on the mountain station at Sandberg, California. Now Sandberg is automated and my main station is Los Angeles.

I have enjoyed my time with the Weather Service and am now in my 25th year. The technology has improved tremendously since the forties and promises to be more interesting as the modernization plan develops. One last observation, the salaries have greatly improved since those war years but the cost of living also increased along with the impossible traffic conditions here in beautiful Los Angeles.

Personal View

of

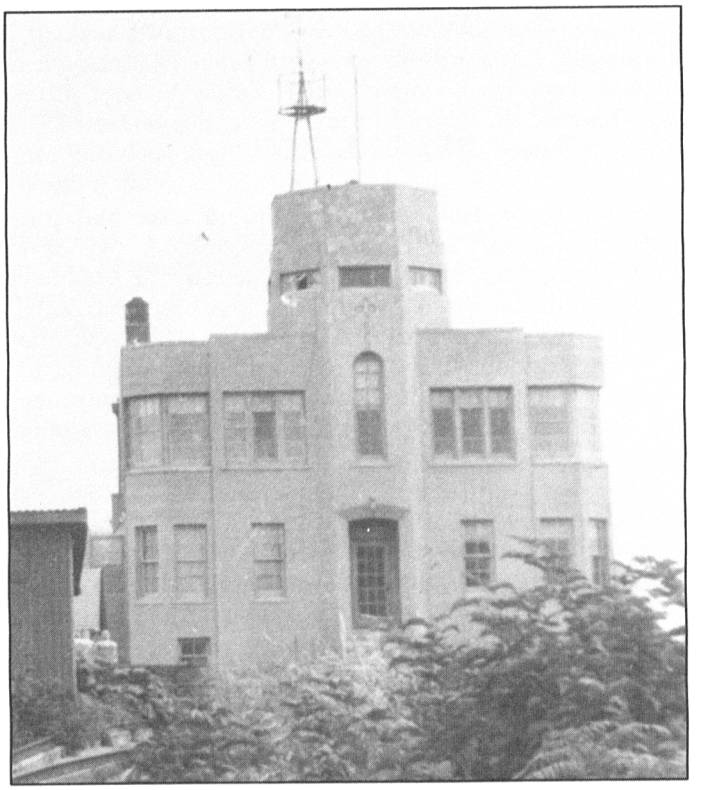
LAVERA ROLAND

I worked for the Weather Bureau from 1943 to 1946 at Tatoosh Island and in the Portland city office. In 1943 a vacancy occurred and I was available. (I lived on the station and therefore knew that the Weather Bureau needed a new employee.) I left the Weather Bureau in 1946, due to pregnancy.

LaVera Roland with her first Silver Salmon (1943).

My previous educational background included three years of college. The Weather Bureau provided on-the-job training. My first impression of the Weather Bureau was that it was a man's world I stepped into, but I was well received. Morale on station was good. I think one of my major contributions was in doing my daily assignments.

My duties included Climatology, surface and upper air observations. I worked all shifts, (eight-hour shifts), and 48 hours a week. Pay at the time was low. There were seven men and one woman at my duty station.

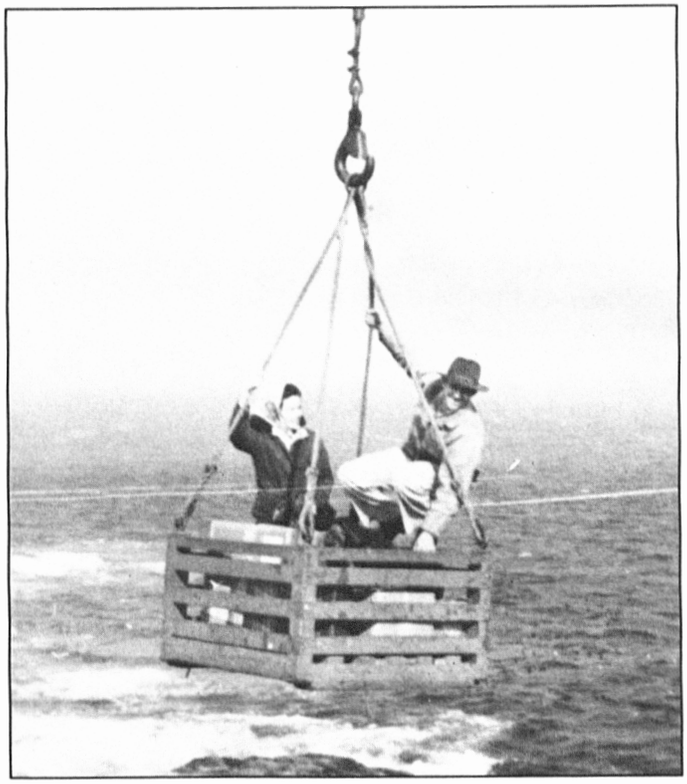


Weather Bureau office at Tatoosh Island (1943). Photograph provided by LaVera Roland.

On Tatoosh, every day was interesting. There we lived a way of life that few have an opportunity to experience. After living and working on Tatoosh the Portland city office seemed tame. Would I choose to do it again? Yes!

Editors note: With her response to our questionnaire, Ms. Roland has included a copy of an August 9th, 1943, newspaper article about Tatoosh island. Here is an excerpt from the article:

So perpendicular are the seventy-five foot cliffs, no ship can land. The mail boat making its weekly trip pulls up under the lee of the north wall. If the weather is mild (which it usually isn't) diesel- powered winches lower a basket on a cable. With many misgivings the visitor hurriedly scampers into the cage and up he goes like the man on the flying trapeze, dangling between sea and sky. A half dozen coast guardsmen steady the basket as it plunks on the platform, and there you are. "Come on up and see me sometime."



Transportation to Tatoosh Island (1943). Photograph provided by LaVera Roland.

Personal View

of

CHARLCIA B. ROSENLUND

I worked for the Weather Bureau from the spring of 1944 to October, 1948. My assignments were at Tulsa, Oklahoma, Fairbanks, Alaska, and Ely, Nevada. I wanted a more interesting and worthwhile occupation than the one I had, and I had learned from my friend that the Weather Bureau needed new employees. I was using my maiden name when hired. In October, 1944, I left the Bureau. I married, and my husband was working outside the Ely area so I left to be with him.

My educational background included graduation from high school and one year college. The Weather Bureau provided training in weather observations, mapping, and radiosonde.

I was received very well by Weather Bureau employees. I was treated great. I loved the work and associations of the people around the airports - very exciting! As for the morale on station - most everyone was happy, a few were grumpy.

My duties included weather observations, balloon runs, mapping, teletype, and radiosonde. The shifts were days, evenings, and midnights. I worked eight hours a day, 40 hours a week. There were about fifteen other people at my duty station - I cannot remember for sure. I cannot remember what we were paid, but the pay was considered good. We were given more money to work in Alaska.

The high point of my career was getting the opportunity to go to Alaska and work. The lowest was working the midnight shift in Ely, Nevada. I was happy to have the opportunity to do the work. It gave me a feeling of doing something worthwhile. I would choose to do it again because I liked it very much. We had a lot of fun days and some that were not so much fun.

I feel that my major contribution was doing my job as well as I could. Several times a pilot was dependent upon my weather observation to land safely, my report was very important.

Personal View

of

HAZEL TRAPP SALMON

I began working for the Weather Bureau in 1941 at the Washington National Airport, but I also worked at the Anchorage, Alaska, Regional Office. My name at that time was Hazel Trapp. My husband was with the Weather Bureau, and I had heard from him that they needed new people. I worked for the Bureau because of the good hours and salary, and nearness to home. My starting salary was $1440 per annum. I left the Weather Bureau in 1944 when my first child was born.

My previous experience had been in retail sales. At the Weather Bureau I did clerical work - no training was necessary. Working there was not very demanding. It was like play compared to sales. I don't recall any highs or lows. If the times were the same,I would do it again. I was received as part of a family, and the morale on station was good.

I worked daytime shifts, eight hours a day and forty hours a week. It was a Regional Office with five women and seven men.

In Alaska it was one big family. People from the outlying stations stayed in our homes. One couple stayed with us two months - until housing became available. I took leave and cared for two Weather Bureau children when the mother was ill. We looked out for one another - Family!

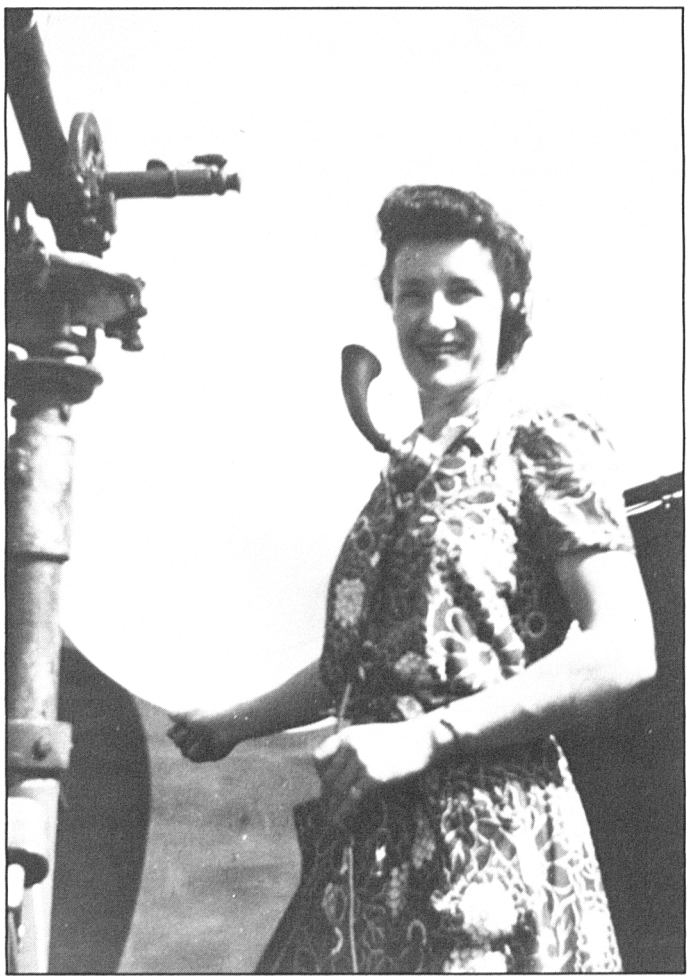
Personal View

of

DOROTHY GAY SAWYER

I worked for the Weather Bureau from January 3rd, 1944, to January of 1949 at the Boeing Field Observation Unit, Seattle, Washington. A friend taking flying lessons at Felts Field in Spokane heard that the Weather Bureau needed new employees and told me. It sounded like an interesting job – I had just gotten my pilot's license and was interested in weather.

When I started, I was employed as Dorothy J. Gay – changed June, 1946, to Dorothy Gay Sawyer (married.) In January, 1949, I left the Weather Bureau because I was expecting my first child.



Dorothy Sawyer (1944)

I was appointed as SP–3 at $1440 per year.; received an upgrade on June 27, 1948 – SP–1350–6 at $2895.60. I retired at $3351.00.

My previous educational experience was an associate Degree from Spokane Jr. College, including three credits CAA Ground School and private pilot's license.

The Weather Bureau provided a six–week course at the Weather Bureau Office in downtown Seattle.

I was received well by the Weather Bureau employees. The male forecasters were not too thrilled with women observers but they were a nice group to work with. The Bureau was a great place to work at an interesting job with a nice group of people. The morale on station was good.

The duties were as follows: Took hourly surface observations without supervision for a large part of the time and took three and six–hourly synoptic observations. Also issued special reports when required and special synoptic observations for transmission. Relayed airway weather reports to airport traffic control tower and airway traffic control center by interphone; relayed check observations to switchboard operators for public dissemination. Entered on station records data obtained from autographic instruments such as triple register, barograph and thermograph; made monthly computations of wind data to determine prevailing wind direction; made monthly compilation of cloud height data. Checked observations taken by observer on previous shift for accuracy and adherence to regulations; answered telephone calls pertinent to observations. Kept teletype weather reports which came in constantly – filed in proper place for use by forecasters.

I worked all shifts – days, evenings, nights – eight hours per day – 48 hours per week until the war ended – then 40 hours.

There was only one woman forecaster at my duty station in the five years I was there. There were all women in the coding unit – women charters – mostly all observers were women.

The low point of my Weather Bureau career was a plane crash on take–off from the field in December, 1948.

Working for the Weather Bureau was interesting. There were a variety of duties – mostly good people to work with – new things to learn constantly. For those reasons I would choose to work there again.

I feel that my major contributions included just doing a good job that needed to be done and enjoying the work.

Interesting experiences? Sorry, it has been too long ago and too many other lives since then to remember much from over 40 years ago. I still have one friend from 1944 that I still see.

Personal View

of

SUSAN SOHLER

On March 17, 1942, I started working for the U.S. Weather Bureau at the Seattle, Washington, City Office. I was looking for war work and saw several flyers in the Post Office for War Service Appointments. The Post Office advised the work in the Weather Bureau was better. It sounded interesting and it would help in the war effort.

I had been teaching in a one-room country school and doing a little nursing care. The Weather Bureau was desperate for somebody to work as the staff was going to Boeing and the Seattle shipyards for better paying jobs. When it was learned that I had a year of Physics from Wayne State Teachers' College and lived on a farm two miles from Belden, in northeast Nebraska, I was declared highly qualified. Farm folks were deemed more "weatherwise." Actually, they were so desperate any halfway warm body able to breath was acceptable.

I trained on the job for less than two weeks before being given shift assignments. My training was Circular N and the Cooperative Observing Manual. No certification test was taken or required. The other employees were very helpful. However, I was considered somewhat of a curiosity as the first woman to work in the Seattle office. The others were older men and did not look upon me as a threat to their security.

The work was interesting. I liked it, and was anxious to learn. There were so few people, only eight or nine, and we kept busy. The office took observations, plotted and analyzed maps, did climatological work and briefed the newspapers. However, forecasts were not allowed to be given out during the war!

We took measurements, and used the triple register. There were weather records to be kept and monthly and annual publications to print. The sunshine recorder didn't work most of the time, so we watched for shadows to keep track of the minutes of sunshine. The fog climatology was precise; we were always on the lookout for fog, recording the minute it began. It seemed like we were always copying records by hand to send to Washington. I don't know what use they made of them. We were busy all the time.

I plotted one weather map each morning. I started on the map at 5:30 a.m., the beginning of the shift. It was then analyzed by the forecaster. There were three shifts – 5:30 a.m. to 1:00 p.m., 1:00 p.m. to 9:00 p.m., and 10:30 p.m. to 7:00 a.m. Later, the 1 to 9 shift was abolished and we had two shifts covering the hours of 7 a.m. to 7 p.m. We always worked six days/week and took turns working Sundays.

The morale was all right. There was no socializing and office parties were against the rules during wartime. However, I did receive a box of candy when I left. The older fellows kept at their jobs and there was no griping. Later a college girl joined the staff. I worked for twenty months until March 1, 1944. During that time the college girl quit. Also, another one worked even a shorter time, and, a third, an alcoholic, didn't work out. A fourth woman came just before I left.

I was paid an annual salary of $1440 as a junior observer. My biggest thrill was being promoted in less than a year to assistant observer. The base pay for five days/week (not counting the overtime) was $1875/year. This compared with salaries of over $2400/year that were being paid by Boeing.

The low point of my career was probably when I started. The job seemed complicated and there was a lot to learn. One of my more memorable experiences was when one of the men went to adjust the anemometer on top of a pole on top of a building several blocks away. I was to watch the office register and when it started working signal him by waving. He climbed the pole and made adjustments. Meanwhile, I thought while he was on his way to the pole I could do some work on my desk. I got so wrapped up in my work I forgot he was on the pole waiting for me to wave. I suddenly remembered and waved. He took it well.

Once I forgot to read the weekly crop report to Western Union. The Washington, D. C., office called the Official in Charge at home at 4 a.m. and wanted to know where the report was.

I joined the Navy (WAVES) on March 1st, 1944, for better benefits and the opportunity to travel. However, the benefits didn't seem really that good with the WAVES and the travel, after Aerograph School in Lakehurst, N.J., only took me to Ottumwa, Iowa (which did have the advantage of being closer to home).

Looking back, my impression of working for the Weather Bureau is that it was an enjoyable experience – very satisfying. I would do it again. I enjoyed it. I have pleasant memories. I feel my major contribution was being at work all the time, being dependable, serving the country, and being part of the war effort.

Personal View

of

ESTHER STUDER

My appointments with the Weather Bureau were as follows: at Goodland, Kansas, from April 4, 1944, to May 7, 1945 - October 16, 1945, to December 17, 1946 - February 7, 1956, to February 21, 1959 - April 8, 1959, to January 17, 1960 - part-time January 18, 1960, to October 27, 1960 - and December 12, 1962, to July, 28, 1963; at Alamosa, Colorado, from July 29, 1963 through April 1, 1973; again at Goodland, Kansas, from September 2, 1973 through May 31, 1985. I retired May 31, 1985, with 30 years service.

These were the wages for the various grades: SP-3 in 1944 - $1440; SP-4 in 1945 - $1902; SP-5 in 1946 - $2394; GS-7 in 1959 - $4980; GS-9 in 1967 - $7957; GS-10 from 1973 to 1985 - $14,905 to $18,626.

I worked for the Weather Bureau because I needed a job. At the time I started there, I used the name of Esther Anderson. I learned that the Weather Bureau needed new employees from the Meteorologist in Charge that ate supper at the restaurant where I was the waitress. He liked the job I was doing and one evening he offered me a job at the weather office.

My previous experience included high school, farm work, and service work in Washington, D.C. The Weather Bureau provided on the-job training.

My first impression of the Weather Bureau was that it was very interesting. I really liked it. The employees were very nice. All the workers were women except for the MIC. There was a lot of rapid turnover, but in general the morale was o.k.

The duties included surface observations, map plotting, and answering numerous telephone calls. I worked all rotating shifts, eight hours a day and forty hours a week.

What were the high and low points of my career? Retirement. The low point was when I was stationed at Alamosa, Colorado and wanted to transfer back to Goodland. There always seemed to be vacancies at Goodland but I was never selected for one of the positions. I was a single parent at the time with several children to raise. Finally I scraped up enough money to join the union, and presto the next time there was a job opening at Goodland I was selected.

I worked with all women during the war years and after the war was over, men began replacing the women in the work place. I would choose to work for the Bureau again. Wages for women working for the Weather Bureau were great for the times. Working for the Weather Bureau, women's wages were more compatible than anywhere else.

I feel that my major contributions included doing neat bookwork for the office and keeping current the climate charts that I developed. I had an excellent weather radio voice. After I retired there have been several inquiries about where the woman went that used to be on the weather radio.

While I was at Alamosa there was a feud going between the cloud seeders and the farmers. The Weather Bureau was caught in the middle. One night the farmers dynamited the cloud seeders' radar. Another time the farmers saw the (Alamosa Meteorologist in Charge open the door on the PIBAL shelter to take a PIBAL and they fired a rifle at him. The bullet hit the door making the MIC very nervous.

Personal View

of

KATHLEEN MCCORMACK TROY

I worked for the Weather Bureau from March 1942 till 1946. I worked at Gore Field [Great Falls, Montana] in the Weather Bureau office which was upstairs in the airport administration building.

Kathleen Troy (1942)

On March 10, 1942, a newspaper article was run looking for women to apply for jobs and to serve as weather "men." There were 100 applicants. I was in college in my senior year. I was getting a B.S. in Chemistry and Physics. The Official in Charge of the Weather Bureau was in my Physics class at college. He found out that I had enough credits to finish at the end of the winter quarter, so I was offered the job. He told me that it was a pilot program and that I was the first girl ever to be a Weather Observer. I took the job and graduated with my class in June. I had no experience in weather, other than getting my degree in science, also, one of my minors was math. The OIC told me later, when I asked why he hired me, that he liked the way I worked and liked the way I did in school. I did not see the news item in the newspaper till later.

I was hired for $120 a month. The Weather Bureau provided just on-the-job training. I trained as I went, first as a weather observer - later became a radiosonde technician and record keeper. When I left in 1946, I was head girl in the office.

I started out learning to read temperatures and record them. I sent out the weather to the various agencies, radio stations, newspapers, etc. Then I learned to record everything, do the records books and summaries - all the paper work that used to go on. Learned to send up the "wind balloons," track them on the theodolyte and record them. From there went to learning how to send up and chart the radiosonde readings. The last year I was there, I did mostly radiosonde and trained new personnel to do radiosonde. I helped train a lot of the Airmen from the base, which was then situated on Gore Field.

I worked all shifts, all eight hours - 8 [AM] to 4 [PM], 4 [PM] to Midnight, and Midnight to 8 a.m. For a while there was a morning radiosonde shift from 6 a.m. to 2 p.m. and afternoon radiosonde from 4 p.m. to 12 p.m. I worked this p.m. shift a lot and hated it. We normally worked eight-hour shifts, and all during the war we worked six days a week. As I recall, on a normal day shift, there was the boss, two observers, and one forecaster. At evening and night there was just an observer, the forecaster, and radiosonde observer.

The office was a very well-run businesslike place. Very efficient with no time-wasting at all, but also very warm and friendly. Most of the men in the office were most cordial and helpful and really made me welcome. There was only one that seemed to resent the intrusion of women and used to send us girls on "fools' errands" at first, but he too finally came around. The morale was tops at that station - I loved every minute I worked there. I think the bosses were super.

I left the Weather Bureau in May, 1946. I got married in October, 1945, and worked until the following May, then left because I was expecting my first child in August. My name in 1942 was Kathleen McCormack, now it is Kathleen Troy.

I don't really recall any low points, but remember how great I felt, whenever I got a really great rating. The airport was an exciting place to work, because of all the activity. It was then the training base for the Airmen, and was very busy because it was also the civilian airport. The terminal was always buzzing. I would take that job again in a minute if I were 50 years younger. I loved it, that's why! I felt my major contribution was the others I helped train, and (as my boss said) my enthusiasm for my job.

I really had a lot of great experiences, i.e. learning to inflate the big balloons, hooking the parachutes, the balloons and the radiosondes all together and trying to launch the whole business on the super windy days we had in the Spring and Fall in Great Falls. We used to take them down on the runways and run like heck to get them up. That's when the boss decided we girls better all wear slacks. At that time he wouldn't accept jeans, they had to be nice wool or gabardine slacks.

In my years following the Weather Bureau career, I have raised five children. After 20 years at home, I went back to college; converted to an elementary certificate and taught 20 years in the Augusta grade school. Retired in 1986, and am now enjoying my 17 grandchildren.

Personal View

of

MARY JANE HUTSELL WILLIAMS

I worked for the Weather Bureau from December, 1942 to October, 1947. My duty stations were at Reno and Winnemucca, Nevada, Tucson and Phoenix, Arizona. I learned about the Weather Bureau opening from a newspaper ad. I was looking for a more interesting job and the Weather Bureau opportunity came at that time.

I was a high-school graduate, and, before working for the Weather Bureau, I had been employed as an order and file clerk for Hallmark Company and a payroll clerk for an Arizona construction company.

I used the name of Hutsell when I started, then Williams after my marriage in 1947. I left the Weather Bureau in October, 1947 to return to school (Arizona State).

To the best of my knowledge, my starting salary was around $100 a month and in 1947 when I resigned I made $2770 a year.

The Weather Bureau provided six weeks (six days per week) of training at the Weather Bureau school in Los Angeles, California, city office.

I was received with some reluctance and much skepticism at my first station. After that I was received well. My first impression of the Weather Bureau was that employees were very dedicated to the job. I was impressed with the accurate information given to pilots and the general public. On-station morale was generally good.

My duties included observations, PIBAL, map plotting, equipment maintenance, climatology recording; in Winnemucca - teletype use; in Phoenix - RAOB and Adiabatic charts.

Shifts were mostly round the clock on a rotating basis in Reno and Phoenix; in Tucson, mostly evening and midnight; in Winnemucca, night shift. I worked eight hours a day (except in Winnemucca where it was ten hours). At first we worked a 48-hour week. This changed, before I left, to a 40-hour week.

There were five or six other persons working at the duty station in Reno, two in Winnemucca, five in Tucson and eight or nine in Phoenix.

The only low point that I remember from my Weather Bureau career was being sent to Reno as my first duty station instead of Phoenix as I had expected. Being transferred to Tucson was definitely a high point, as well as being promoted from Observer to Meteorological Aide.

Looking back, I think there were more advances made and the Bureau greatly upgraded during World War II? Would I do the same work again? Yes. I feel it is a needed service and it is also very challenging since it is always changing.

In working for the Weather Bureau during World War II, we released men to enter the service, and by proving our capabilities it opened the door to women in the field of meteorology.

There were some interesting experiences. All the Weather Bureau staff in Phoenix had a chance to fly in the Goodyear blimp when they tied down for several days. The pilots received weather information from our office and thought we would enjoy a ride. It was an exciting experience.

I remember one time in Tucson when, due to vacancies and illness, the staff fell to three (including the Meteorologist in Charge) which meant we had no days off and I filled the swing shift for over a month. Needless to say, we were greatly relieved when we got back to a full complement again.

At the Phoenix office we were plagued by black widow spiders, which we got used to, but one day I almost panicked when I started to reach into the thermometer shelter to moisten the wet bulb and found a spider sitting on the water cup. Since time was important to get the observation out I decided to dispatch the spider by spraying him to death with fly spray. It worked and the observation was in on time.

BIBLIOGRAPHY

Clarke, I.C., 1918: American Women and the World War. D. Appleton and Company (New York and London). 545 pp.

Gluck, S.B., 1987: Rosie The Riveter Revisited. Twayne Publishers (Boston). 282 pp.

Hartmann, S.M., 1982: The Home Front and Beyond. Twayne Publishers (Boston). 235 pp.

Higonnet, M.R., J. Jenson, S. Michel, M.C. Weitz, 1987: Behind the Lines. Yale University Press (New Haven and London). 310 pp.

Honey, M., 1984: Creating Rosie the Riveter. The University of Massachusetts Press (Amherst). 251 pp.