

Manzanar Fire Department

Officers Duties

Chief:

1. Keep a Chief's daily journal to be sent into the Regional Office.
2. Be on 24 hour call unless replaced by Asst. Chief.
3. Take care of all administrative duties assigned by the Fire Protection Officers.
4. Be responsible for officers and men under his command.
5. Be in charge of the fire until the arrival of the Associate Fire Protection Officer or his assistant.
6. See that all orders, rules and regulations are obeyed and hold the violators responsible for the violations.

Asst. Chief:

1. Keep a Asst. Chief's daily journal to be sent into the Regional Office.
2. Supervise the Fire Prevention Officers.
3. Supervise all outside details.
4. Replace the Chief on his days off or absence.
5. Be in charge of the Fire until the arrival of his superior officer.
6. See that all orders, rules and regulations are obeyed and hold the violators responsible for the violations.

Captain:

1. Keep a Captains daily journal to be kept on file at the station.
2. Take care of all matters on the station floor.
3. Execute all orders given by his superior officers.
4. See that the station and all equipment are in order.
5. Check in all equipment, letters, notes, circulars as they come into the station.
6. Keep a station watch in between the hours of 7:00 A.M. and 8:00 P.M.
7. Be responsible for all his men to be on duty at all times unless excused.
8. Be in charge of the fire until the arrival of his superior officer.
9. Be responsible in having an engineer and a hydrant man on duty at all times.

FIRE DEPARTMENT MANZANAR RELOCATION AREA

July 16, 1942

RULES & REGULATIONS:

1. It shall be the duty of all members of the Fire Department to read and become familiar with these rules and regulations.
2. The term members shall include all members of the Fire Department including officers.
3. All orders, General or Special, issued after this date shall become a part of these Rules & Regulations and shall have equal weight and effect.
4. Any member of the Fire Department assigned to act in a higher capacity will have all the authority of that position and he shall be obeyed as though he were regularly assigned to that position. He shall also enjoy all privileges attached to said position.
5. These Rules and Regulations cancel all previous rules and regulations issued prior to this date that are in conflict herewith. All Rules & Regulations issued prior to this date and not in conflict herewith, are still in effect and have equal weight with these Rules & Regulations.
6. The order of authority in the Fire Department is as follows: Associate Fire Protection Officer, Assistant Fire Protection Officer, Fire Chief, Assistant Fire Chief and Captain. All orders issued by a higher authority shall pass through these channels to the members effected. All requests and reports originating in any subordinate rank will pass through these regular channels in reverse order. All written communications passing through channels, will be signed by those whose position require attention.
7. These Rules and Regulations will be obeyed by all members of the Fire Department and it shall be the duties of all officers to enforce them at all times, reporting to their superior, in writing, any infraction or delinquency. For this purpose, Captains will be considered Officers.
8. No report against any member will be made by a superior, without the accused being allowed to read the report. A statement will be made by the accused, giving his version, together with the statement that he has read the report.
9. All members will obey the orders of their superiors. Obedience will be prompt and implicit.
10. In times of emergency when there are no rules or regulations covering a situation, or, should conditions clearly show that these rules and regulations do not apply, it shall be the duty of members to act promptly with judgement and discretion; rendering a report to his superior when conditions permit.

Rules & Regulations (Continued)

11. Members on duty will not be relieved from duty at the Fire Station, except on orders from the Associate Fire Protection Officer.
12. No member of the Fire Department will leave quarters when on duty without the permission of the Fire Chief. Such permission will not be granted to take care of personal matters that can be taken care of while off duty, unless a qualified man from the off-duty platoon works in his place. Off duty men relieving a man will be subject to all orders and duties of men regularly on duty.
13. When the Platoon on duty goes to mess, they will go in a group, leaving a Fire Alarm Operator, Engineer and at least one (1) other capable man in the Fire Station. The procedure outlined in Section 10, will also be followed. They will always go in the utility truck and be kept in a group at all times; they will proceed to the mess-hall over a standard route and return over the same route. Should a fire occur while they are proceeding to or from the mess-hall, the Engineer will proceed over the standard route, until he catches the attention of the crew going to mess-hall and will then proceed to the fire and the driver of the utility truck will follow. They will all eat at the same table, located at the front of the mess-hall where they can see the Fire Apparatus, should it call while they are eating. The utility truck will be parked in such a manner that they can proceed in any direction without backing or turning around.
14. When any detail leaves the Fire Station, the Fire Chief will notify the telephone operator and/or the Fire Alarm Operator where the detail will be working or drilling. If the detail is to be located there for some time, they will contact the Fire Alarm Operator and/or the telephone operator, giving them the telephone number of the nearest telephone, as soon as they arrive at their destination and will again report before returning to quarters or moving to a new location. A man will be posted on the telephone to receive alarms if there is no one at the reporting telephone constantly who can notify the detail in event of a fire.
15. Passes for early-mess are issued to the Fire Department; no member will be admitted to early-mess without a pass. Passes will be secured through the Fire Chief and the Fire Chief will be held strictly accountable for the passes and their uses.
16. All members will ride to and from fires on the apparatus in their designated positions, unless otherwise ordered. When arriving at their destination in response to an alarm of fire, they will remain near the apparatus if not called into action and hold themselves in readiness to execute any order they may receive.
17. The platoon on duty will keep themselves in proper uniform of the department. They will keep themselves in readiness to respond to alarms of fire at all times and will not take a shower or undress without having their bunker clothes ready for immediate use. The practice of going about quarters without shoes, while on duty, is strictly prohibited.
18. Members will not park cars within twenty (20) feet of any building, nor will anyone be allowed to park a car within twenty (20) feet of the Fire Station unless in accordance with the order issued by the Associate Fire Protection Officer.

19. Members will not allow any vehicle to run over fire-hose at any time, unless it is fire apparatus enroute to a fire or to a hydrant that cannot be reached otherwise. Running over fire-hose that is not charged with water is more injurious to the hose than when it is fully charged.

20. Members will observe all Camp Fire Regulations and will report any violation to the Associate Fire Protection Officer and/or the Assistant Fire Protection Officer through regular channels.

21. Members will not use the telephone for private business without the permission of the Chief; when such permission is granted, the calls will be brief as possible. The practice of visiting on the telephone is strictly prohibited.

22. When the telephone is answered, say: "Fire Department, Fire Chief Brown", or whatever the designation may be.

23. Bunker coats and helmets will be carried on the apparatus by all members on duty; they will be changed when the Platoon goes off duty. Hose-straps and spanners will be carried by all Platoon members, except engineers and Fire Chief of Engine Company activities; those assigned to Truckmen duties will carry axes in a belt.

24. Members are not allowed in the office, except on duty or on business and those on duty will not tamper with the files or records that do not concern them. Private use of Government stationery or equipment is strictly prohibited. Fire Chief and Fire Alarm Operators will be held strictly accountable for the enforcement of this section.

25. The boots furnished to members of Fire Department are not issued to be worn in place of shoes; they are issued as part of the bunker clothing, for use in fire-fighting and related uses;

- a. To be placed in bunker trousers, to be set along side of bed when retiring.
- b. To be taken to shower when bathing or whenever undressing, while on duty; boots and bunker trousers are to be set out for instant use.
- c. While engaged in Fire Department work where boots are necessary.
- d. To be worn in quarters during rain, under conditions where shoes would not be advisable.

Boots will not be worn at any other time without the permission of the Fire Chief and/or his assistant.

26. The camp speed regulations will be observed at all times by drivers of fire apparatus, except when actually responding to an alarm of fire, and then they shall not drive at a speed that will endanger life or property.

27. Drivers of automotive equipment assigned to Fire Department will at all times observe Camp speed regulations, unless making an emergency call with men or equipment for use at a fire, and then they shall not drive at a speed that will endanger life or property.

Page 4.

Rules & Regulations (Continued)

28. A list of all equipment carried on each piece of automotive equipment in Fire Department service and the original will be kept in the office of the Fire Department. Frequent checks will be made to be sure all equipment is in its place and ready for immediate service. Checking will always be routine before leaving a fire to be sure no equipment is left behind. Missing equipment will be reported in writing at once.

29. These Rules and Regulations will be read by the members on duty each Sunday, under the direction of the Fire Chief, who will see that all men are present and entry will be made in the Journal of the fact.

30. Whenever the fire apparatus responds to an alarm of fire during a rain, it will be dried off immediately when returned to quarters; giving especial attention to the ladders. This applies any time of day or night.

31. All motor equipment assigned to the Fire Department will be filled with gasoline and oil at all times and be serviced or inspected at least once each week and be ready for full service at all times. Fire apparatus and Crash trucks will be filled with gasoline when they can take three (3) gallons.

Manzanar Fire Department

Rules and Regulations

1. Roll call every morning at 8:00 A.M.
Both Platoons line up for change of shift.
2. Engineers duties:
 - a. Check truck and equipment after any fire or drills.
 - b. Check truck and equipment when coming on duty. Report to officer in charge of any necessary repairs or replacements.
 - c. When Fire truck or hose wagon is filled with gas or oil report to the Captain the amount of gallons put in.
3. Station watch to be kept on duty from the hours of 7:00 A.M. to 8:00 P.M.
 - A. Duties:
 1. Greet all incoming people and ask their business and escort them to proper personnel.
 2. Check in any incoming equipment or supplies.
 4. He shall be responsible for all equipment or tools that go out of the station, if there is any question about them to call the Captain.
 5. Not to be playing any games or be off the station floor.
 4. In case of night fire, the next station watch is to notify the Fire Chief, the Fire Protection Officer and the Police Station, the location of the fire and remain in the station till the fire truck returns.
 5. In case of fire, hosewagon to be driven only by the men on duty.
 6. Hosewagon to be used only for official business. Report to Associate Protection Officer or the Fire Chief.
 7. Station and office to be washed, cleaned and mopped twice a day at 7:00 A.M. and 5:30 P.M.
 - a. Brooms to be hung in their proper places when through.
 - b. Mops to be washed in soap water and hung up to dry in their proper places.
 - c. Station floor to be kept dry.
 8. Fire truck to be washed and cleaned every morning and after any fire or drills.
 9. Fire Protection Officer's car to be washed and cleaned every morning.
 10. Keep the yard around the station and barrack clean.
 11. Inspection of station and quarters every Saturday morning. Apparatus and equipment.
 12. To take any equipment and tools out of the station, a signed receipt must be obtained from the Captain in charge. Receipt to be returned when tools are returned.

13. No fire hose to be loaned out of the station without the permission of the Fire Protection Officer or the Fire Chief.
14. Fire hose to be changed on the truck at least once every two weeks.
15. No cursing in the station.
16. No smoking during drills or fires.
17. No one but administrative personnel in the inner office at any time unless on official business.
18. Leaves during duty hours:
 - a. A fireman capable of doing his duties must remain in the place of a man taking time off.
 - b. Only one man allowed to go to the Canteen at any one time. Report to Captain before going and after coming back.
 - c. To go out of station, report to Captain and get permission first.
19. Violations of any house rules shall suffer such penalties as his superior officers shall demand.

MANZANAR FIRE DEPARTMENT
January 26, 1944

Rules and Regulations

These rules govern the working schedule applied to working conditions around quarters. The Captain or Assistant Captain will be held responsible for the assignment of each man, under his command, to certain duties. These will be in relation as to importance of operations:

1. First duty would be in checking of gas, oil and batteries of all apparatus, starting the motors and checking all tires.
 2. Checking of all the equipment and maintenance of same, keeping hose clean and changed, suction dried, folded and carried properly, extinguishers cleaned and in working order, fire axe cleaned and all the equipment in good working order.
 3. The Auto Fireman to be held responsible for the condition of motor and underneath the apparatus. The Engineer to be responsible for the apparatus under his control. This means the operation and maintenance of pumps, equipment, etc.
 4. Particular attention will be given to dusting of apparatus and general cleaning of quarters. This work to be done before any recreational activities.
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109
fires

December 13, 1943

Ralph P. Merritt, Project Director
Manzanar Relocation Center
Manzanar, California

Dear Mr. Merritt:

We have just noted your report of a fire in residence
1-10-1 on November 15, 1943.

Since you did not describe how the oil space heater
proved faulty, we are wondering if soot or carbon is accumula-
ting in large quantities, due to continuous low fires or im-
proper cleaning. It has been our thought for some time that
these heaters are too large, therefore, making it necessary
that they operate with low flame resulting in clogged burners.

One solution to this may be to eliminate every other
heater and use one heater for two apartments. This, we believe,
could be accomplished through a simple system of heat ducts
either from the present location or a new one just out side of
the building.

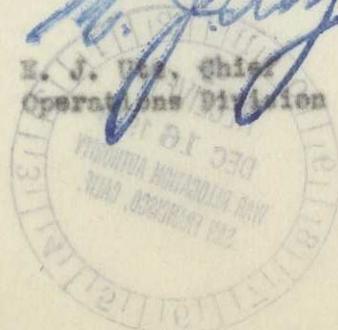
In any event, we would recommend enclosing the heater
with some fireproof material.

If you believe the situation warrants, may we suggest
you contact the H. C. Little Co., San Rafael, California, for
advice. Their Mr. J. C. Hemingway, Jr., has often expressed
his desire to be of any assistance possible. His phone is
San Rafael 1664. He may be able to arrange a trip to Manzanar.

Inasmuch as we have many of this type heater similarly
installed at other centers, we would appreciate more details
as to their faulty operation and proposed corrections, as well
as any advice Mr. Hemingway may have to offer.

Sincerely,

[Handwritten signature]
E. J. [unclear], Chief
Operations Division



cc -
Mr. Cozzens

WAR RELOCATION AUTHORITY

MANZANAR WAR RELOCATION AREA
Manzanar, California

In reply, please refer to:

Engineering
Division

December 22, 1943

E. J. Utz, Chief
Operations Division
War Relocation Authority
Barr Building
Washington (25), D. C.

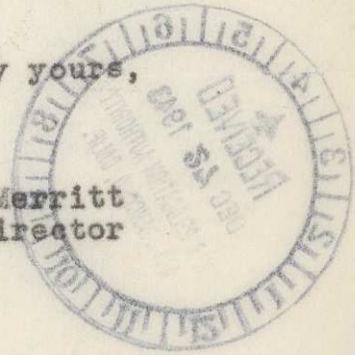
Dear Sir:

In reference to your letter of December 13, 1943 concerning Oil Space Heater at residence 1-10-1 where fire occurred November 14, 1943. Evidently there was some confusion on the type of stove that was used in this residence. The stove was not a H. C. Little heater which are in use at the new Staff Houses and High School buildings at the present time. They have proven satisfactory except for some trouble on the blower fans where too large a fan had been installed.

The stove that was in use in the residence of 1-10-1 where the fire occurred was a small Coleman R302 Space Heater of which we have a large number of similar stoves in use throughout the Center. For your information I am enclosing a copy of the report on this fire which was made by a Committee appointed by me, dated November 19, 1943.

Very truly yours,

Ralph P. Merritt
Project Director



Enclosure 33445

AMS/fy

cc: R. B. Cozzens



UNITED STATES
DEPARTMENT OF THE INTERIOR
WAR RELOCATION AUTHORITY
Tule Lake Center
Newell, California

Hon
#

In reply, please refer to:
FP-323

April 19, 1944

Mr. Ralph Merritt
Project Director
Manzanar Relocation Center
Manzanar, California

Attn: Mr. Frank Hon, Fire Protection Officer

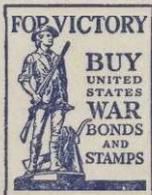
Dear Mr. Merritt:

In answer to Mr. William E. Hoffman's letter,
I am enclosing a copy of our regulations in re-
gard to the use of the auditorium written in
English and Japanese.

Arthur L. Kerr
Arthur L. Kerr
Acting Fire Protection Ofcr.

Encl.

41533



WAR RELOCATION AUTHORITY
Tule Lake Center
Newell, California

March 16, 1944

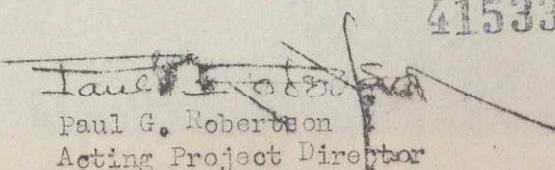
TO: All Persons Concerned

SUBJECT: Regulations Governing Public Assemblies in High School
Gymnasium

The following regulations covering fire safety of high school
gymnasium are recommended:

- (1) Audiences in the gymnasium are to be limited to a maximum of 1280 persons.
- (2) Standing in aisles and exits is prohibited.
- (3) The following aisles are to be maintained:
One six-foot center aisle from the front doors to the stage.
One six-foot cross aisle between center side exits.
Side aisles are to be four feet wide.
- (4) All exit doors must be unlocked during the time the audience is in the building. Corridors to exit doors must be kept free of obstructions and well lighted at all times, while building is occupied by an audience.
- (5) Decorations made of flammable materials must be kept to a minimum. Approval of decorations must be obtained from the Fire Protection Officer.
- (6) Smoking is prohibited during public assembly.
- (7) All assemblies must be under responsible supervision.
- (8) Competent operators of heating and lighting equipment must be in attendance.
- (9) Rows of seats shall be spaced so that not less than 27 inches is obtained from the front of one row to the front of the next.
- (10) A permit from the Fire Department must be obtained in advance for each performance. The use of the auditorium shall be subject to regulations prescribed by the Fire Protection Officer.
- (11) All WRA regulations pertaining to the fire safety of persons and property must be observed.

41533


Paul G. Robertson
Acting Project Director

ハイスクール講堂に於ける 集會に関する規則

- 一 收容人員は千二百八十名を超過せざる事。
- 二 通路及び非常口に起立せざる事。
- 三 正面入口より舞台に至る中央通路(幅六フィート)及び左右両側の入口を通ずる通路(幅六フィート)及び両側の通路(幅四フィート)を空ける事。
- 四 集會の際は如何なる場合にも出入口を開け、出入口への廊下には充分照明をなし、障害物を置かざる事。
- 五 可燃性の裝飾使用は出来得る限り止め、火災防止官の許可を得る事。
- 六 喫煙は絶対に遠慮する事。
- 七 總ての集會は責任を有する主催者の下に行ふ事。
- 八 保温装置及び照明装置には各係りを置く事。
- 九 座席は前後の間隔を二十七インチ以上とす。
- 十 講堂を使用の場合には消防部より前以て許可を受け、火災防止官の定める規則に遵ふ事。
- 十一 人員及び設備の火災防止に関するWRAの規則は絶対に遵守する事。

所長代理

ポール・ロバートソン

SEP -3 1942

WAR RELOCATION AUTHORITY

REFERRED FOR ACTION TO
SAN FRANCISCO, CALIFORNIA, OFFICE
WHITCOMB HOTEL BUILDING

In reply, please refer to:
Econ.Mgt.

*Nash
Hon*

*F-4-40
214*

AUG 31 1942

MEMORANDUM TO: Mr. Roy Nash, Project Director
Manzanar War Relocation Project

SUBJECT: Survey of fire prevention problems at
War Relocation Centers

We are submitting herewith two copies of a report entitled; Survey of Fire Prevention Problems at War Relocation Centers. This report has been prepared by Wm. E. Hoffman, Fire Protection Supervisor, assisted by Edwin Bates, Chief of the Information Division, and George D. Dean, Senior Information Specialist.

The purpose of this report is to provide general over-all information concerning fire prevention problems at war relocation centers in light of experience at these centers during the past several months. The report does not, therefore, attempt to present a detailed discussion of these problems nor give detailed recommendations as to how these problems may be solved. It is anticipated that supplemental brief reports containing detailed recommendations for each war relocation center will be prepared in the near future.

R. B. Cozzens
R. B. Cozzens
Acting Regional Director

Enclosure-2127

2176



WAR RELOCATION AUTHORITY
SAN FRANCISCO REGIONAL OFFICE
WHITCOMB HOTEL BUILDING
SAN FRANCISCO, CALIFORNIA

RECEIVED
MANZANAR WAR RELOCATION PROJECT

SEP - 3 1942

~~CONFIDENTIAL~~ FOR ACTION TO

FOR ADMINISTRATIVE USE ONLY

SURVEY OF FIRE PREVENTION PROBLEMS
AT WAR RELOCATION CENTERS

By William E. Hoffman
Fire Protection Supervisor
San Francisco Regional Office

SAN FRANCISCO
August 21, 1942

I. INTRODUCTION

At War Relocation Centers--as in all other urban communities--the hazard of fire, with its threat to life and property, is an important concern of the local government. Necessarily, steps must be taken to develop adequate preventive and protective measures so that the residents may live without serious fear of their lives or the destruction of property. War Relocation Centers differ materially, however, from the ordinary urban community in two important respects:

First, the government of the community, so far as providing fire fighting equipment and men trained in fire fighting are concerned, is vested in the War Relocation Authority itself. The community council which provides local self-government at the relocation centers is without power to levy taxes, purchase equipment or otherwise to handle the problem.

Second, almost all property at a relocation center is owned by the Federal Government, and consists principally of buildings and community facilities which, in our present wartime economy, it would be extremely difficult to replace. There is very little private property at relocation centers; most of what there is consists of clothing, bedding, furniture and personal effects. There are no privately owned homes or business establishments. From a property standpoint, therefore, residents of the relocation centers have much less incentive to exercise fire caution than in the ordinary community where they would have an important part of their savings invested in a home, household furniture, farm implements, livestock, merchandise or other forms of wealth or means of livelihood.

It is also significant that an important part--probably 40 per cent--of the residents of relocation centers have heretofore lived in rural areas and are not fully aware of urban fire risks.

One of our early jobs, therefore, in these relocation centers has been to develop a consciousness by the residents of the hardships they would suffer individually if a large portion of their community should be destroyed by fire. To an important extent co-operation in our fire prevention activities has been promoted by that type of approach.

In these new communities we have an opportunity to test the recommendations of fire prevention authorities who have emphasized how sharply fire losses can be cut by proper fire prevention measures.

Here we have new communities unhampered by many factors which in older communities make it difficult to enforce fire prevention regulations. We have no habits of long standing in these relocation centers, nor do we have laws that need amending. We start with a clean sheet and make our own laws. All community officials are federal government employees whose actions can be controlled.

The following report is based on careful observation of fire risks at four relocation centers -- Tule Lake, Manzanar, Colorado River and Gila River projects. It also includes a review of fire fighting facilities in these relocation centers and reflects the administrative problems which the War Relocation Authority has encountered in its efforts to provide facilities and trained personnel for fire prevention and suppression work.

In brief, this report summarizes the writer's observations during almost three months of service as Fire Protection Supervisor for the San Francisco Region. The report also carries a series of recommendations for an adequate fire prevention program based on observations up to this time.

II. SPECIAL CONDITIONS CREATING FIRE RISKS

The basic hazard of fire loss at WRA centers arises from the type of construction and the fact that very little consideration has been given to the matter of fire safety. It also is heightened by the dry, hot climate of the arid and semi-arid country in which the WRA centers have been located.

For the most part, the WRA centers were built rapidly to meet the pressure for quick relocation of evacuees from the coastal districts. The basic housing unit at Tule Lake, Manzanar, and Colorado River consists of barracks each 20 feet in width and 100 feet in length, and follows the general pattern of the War Department's theater of operations construction.

The evacuees, therefore, have their homes in barracks constructed of unseasoned lumber and covered with 40-pound tar paper. The roofing also consists of this same weight tar paper. These homes are subject to progressive deterioration from hot desert winds and sun which also add to the fire hazard.

At the Gila River Project, the type of construction is somewhat better, consisting of painted gypsum board siding which, to a limited degree is fire resistant. Also, the Gila River Project will use gas for heating, which offers an additional factor of safety over coal or oil used at the other centers. Apparently, however, the same mistakes have been made at Gila as at Tule Lake and Poston in the design of flues.

Natural Factors Create Hazards.

Basically, therefore, the homes in the relocation centers offer a serious fire hazard in themselves. The threat to human life at the centers is also increased by the fact that with few exceptions, hospitals, mess halls, schools and other places of assembly are of substantially the same

construction at the barracks. But the fire hazard is not alone a matter of the type of construction. It is seriously compounded by the natural setting in which the centers are located. Two of the three centers covered by this report--Manzanar and Colorado River--are in the direst region of the United States. At Tule Lake, the annual rainfall averages 10 inches and the section must be classified as distinctly semi-arid.

The United States Weather Bureau reports that the relative humidity at Manzanar has dropped as low as 2-1/4 per cent and that relative humidity readings of less than 10 per cent can be expected on an average of twelve days during the summer and early autumn. Conditions of flammability during periods when the relative humidity is less than 10 per cent are difficult to describe. According to Mr. Grey, chief of the Bureau's fire weather service in San Francisco: ("A fire occurring with a relative humidity of 2-1/4 per cent would be uncontrollable.")

Humidity in Manzanar Area.

" The following table shows the average relative humidity at noon at Independence, California, approximately six miles north of Manzanar, during the summer and fall months:

Average Relative Humidity at Noon in Summer
and Fall Months at Independence, California

May	23 percent	September	18 percent
June	16 percent	October	22 percent
July	15 percent	November	33 percent
August	17 percent		

Forest service officials consider any humidity condition of less than 15 per cent as creating an acute fire hazard, causing fires to ignite easily and spread very rapidly.

High Winds

A further aggravating factor at Manzanar is that meteorological conditions producing periods of extremely low humidity (namely, a high pressure over the continent) also are conducive to strong winds. In other words, the two are likely to occur simultaneously and with them, too, the probability of high temperatures in the summer and early fall. Observations have established that wind velocities under such conditions may reach as high as 40 miles an hour, occasionally as much as 45 and 50 miles an hour.

The Weather Bureau has officially recorded a wind velocity of 100 miles an hour at Independence, with velocities above 45 miles an hour in all months of the year and above 50 miles nine months of the year. These are the highest wind velocities recorded at any regular weather bureau station in California, including those along the coastline. By comparison, the highest velocity recorded in San Francisco is 50 miles an hour and at Los Angeles, 48 miles an hour.

These circumstances are cited to show the peculiar fire conditions which exist in the desert regions of the Far West. There is no adequate comparison with them to be found anywhere else in the United States. In the Manzanar district, the fire-weather service reports the most acute conditions can be expected to occur during the months of September, October, and early November.

Conditions in Tule Lake Area

At Tule Lake, general climatic conditions constitute a slightly less acute fire hazard than at Manzanar, though severe fire weather is of annual occurrence. It is, however, inclined to be less protracted. The fire-weather service reports that humidity conditions of between 15 and 10 per cent are common, and that on from four to six days annually the relative

humidity can be expected to decrease to less than 10 per cent.

Periods of low humidity at Tule Lake are usually associated with high temperatures and accompanied by considerable wind movement, especially during the hours of peak temperature and lowest humidity. Generally, however, the maximum winds at Tule Lake occur in the spring and while there is no anemometer at the Tule Lake cooperative weather reporting station, the Klamath Falls station has often recorded winds in excess of 40 miles an hour during March, April, and May. In May of this year, a velocity of 64 miles an hour was recorded at Klamath Falls and there is good reason to believe that even stronger winds occurred in the Tule Lake Basin.

At both Tule Lake and Manzanar, the winds are accompanied with little or no precipitation so that fire conditions are apt to be unusually acute at those times.

Conditions at Colorado River

Humidity conditions on the average are not quite so severe in the lower Colorado River Valley, where the Colorado River Project is located, as at Manzanar, though the temperature ranges somewhat higher in the Colorado River Valley during the summer months. At Yuma, about 80 miles in a direct line from the Colorado River Project, the relative humidity averages about two per cent higher in June than at Manzanar and about 12 per cent higher in July and August when some rain may occur. Nevertheless, the climatic conditions in the area are distinctly desertic and the fire hazard is great.

There have been observations of relative humidity of less than two per cent in the Colorado River area. Evaporation amounts to about 130 inches a year, or more than thirty times the average rainfall. As at other

centers, the Colorado River area is subject to high winds--at times of more than 40 miles an hour--infrequently as high as 60 miles an hour. One such storm occurred recently, but fortunately it came at a time of day when few stoves were in use and was followed almost immediately by a heavy rainstorm.

It Could Happen

It is the writer's considered opinion that, should a sizable fire occur at Manzanar, Tule Lake, or Poston under conditions of extreme humidity and wind movement of which there is ample history of actual occurrence, the entire camp might be wiped out unless more adequate preparations are made for fire suppression than now exist. Fire prevention steps now under way will help materially, but will not completely solve the problem.

Winter Conditions

The fire hazard at the Relocation Centers is not limited to the summer months although those months do present the most threatening combination of conditions. The seriousness of a fire in the winter months which might render a few thousand persons homeless is apparent in the severity of the winter weather in the Tule Lake and Manzanar districts and the fact, also, that the relocation centers are situated in areas of extremely sparse population.

At Tule Lake, winter temperatures well below zero are not uncommon while at Manzanar temperatures below 10 degrees are often recorded. In no instance are there facilities at or near any of the relocation centers for the quick movement of large numbers of persons. The population of Manzanar for instance, is greater than the population of all Inyo County, while the population of Tule Lake is approximately that of the city of Klamath Falls. Providing emergency housing for these people in the event of a major catastrophe would be an exceedingly difficult problem.

III. SOME GENERAL OBSERVATIONS AT RELOCATION CENTERS

At all relocation centers several defects in construction from a fire prevention standpoint are readily observable. Particularly important was the lack of proper "jacketing" of flues in all the mess-halls. Adequate protection in this case would require a ventilated "jack" extending 9 inches below and 9 inches above the roof. In several instances, it was observed that the flue was not more than two inches from combustible material on the roof. Steps are being taken to avoid similar mistakes in future construction.

Inadequate Wiring

The inadequate wiring in living quarters at the projects is a matter of serious concern. First of all, a sufficient number of outlets has not been provided, resulting in a tendency to overload existing lines. This is a condition which will have to be carefully watched as there is a considerable amount of electrical equipment yet to be brought to the centers by the evacuees. Much of this is the ordinary "dime store" type of equipment.

There is also, quite naturally, the tendency to plug in extensions and to lead them from one end of the living quarters to another. Often the extension will be hung over nails or a rafter, adding to the hazard of fire because the wear on the insulation soon will expose the wires, producing short circuits. This is particularly true in hot, dry climates such as at Manzanar and Poston, where there is a tendency for the wire insulation to break down in a short time. The overloading of the lines leads to a further complication: When a fuse has been repeatedly blown out, many people will insert a coin or make other improvised adjustments for bridging the fuse.

At Manzanar a survey was made of the amount of electrical equipment in the evacuees' homes. On June 1, 1942, this survey showed, there was in

use a total of 5.5 miles of extension wires of variouys types. An effort will be made to obtain similar information at all other projects; in critical fire seasons it will be necessary to make frequent surveys of the amount of loading on the lines.

Space Heating and Fire Hazards.

Heating of living quarters offers another serious problem, particularly at Tule Lake and Manzanar where there is a long season of severe winter weather. At Tule Lake it will be necessary to replace the sheet metal stoves with cast iron stoves if a serious fire menace is to be averted. Oil stoves in living quarters generally are fairly safe although care must be exercised in their use and when refilling the fuel tank.

Any improvement in construction by way of insulation and greater protection against low temperatures will do much to reduce the fire hazard during the winter months; the tendency toward over-heating in barracks would naturally increase if there are drafts due to poor construction.

IV. ADMINISTRATIVE PROBLEMS IN DEVELOPING FIRE PREVENTION FACILITIES

Many serious problems have been encountered in attempting to provide fire fighting facilities to keep pace with the growth of the relocation centers. It has not been possible to overcome all these difficulties and at this time it must be admitted the facilities are not adequate.

Training Required

Here are some of the more important problems which have been encountered in providing fire protection:

Among approximately 40,000 evacuees now in relocation centers, only two have had training as firemen. One of these was attached to the Fruitridge, Sacramento County, Fire Department; the other had had rather responsible ex-

perience at Carmel Highlands, Calif. They are now at Tule Lake and Poston. One of our first problems, therefore, was to set up a program of training fire fighters. At each relocation center a fire force was recruited from among the first evacuees to arrive. Crews have been kept on 24-hour duty, serving approximately 44 hours a week. They have been kept on 24-hour duty, serving approximately 44 hours a week. They have been organized under a Fire Protection Officer who is responsible for carrying out a training program. Experience up to this time indicates the Japanese are a courageous, intelligent people who quickly respond to a well-organized educational program. There is still a great deal to be done in the field of training a fire force and in developing an adequate fire prevention plan.

Lack of Equipment

Serious difficulty has been encountered in obtaining fire fighting equipment because of priorities on critical materials such as steel, brass, bronze and rubber.

When evacuees first arrive at a project, the fire protection is usually limited to a few first-aid fire extinguishers, some scattered lengths of garden hose, often with garden faucets, and so placed that several of them must be used to reach a possible fire. There are usually a number of shovels available.

The ingenuity of the Fire Protection Officer at the project is challenged by this lack of fire apparatus, the absence of a fire alarm system and also by the lack of telephones in the area occupied by the evacuees.

The fact that there has not been a serious fire under these circumstances is a rather convincing demonstration of the value of fire-prevention activities. There have been a number of small fires, all of which were handled by fire patrols which had anticipated the action to be taken in each case.

Delays in the delivery of fire equipment had to be met by the organization of fire patrols in the hope that any situation could be met until the necessary equipment arrived.

Equipment Delay At Colorado River

The population at Colorado River Project reached 11,306 before a single foot of fire hose or apparatus was delivered. On July 6, one Ford triple combination pumper, equipped with 1000 feet of $2\frac{1}{2}$ " hose, and 300 feet of $1\frac{1}{2}$ " hose, was delivered there. Unfortunately, there were no nozzles for the $2\frac{1}{2}$ " hose, or for the booster hose. A second piece of apparatus of the same type was delivered to Parker on July 27, and was assigned to Camp #2. This apparatus was short 300 feet of $1\frac{1}{2}$ " hose, also the necessary nozzles listed above. In order to use this second fire apparatus, $1\frac{1}{2}$ " hose had to be stripped from the first apparatus at Camp #1.

On July 30th while fighting a rubbish fire at Camp #2, there was a breakdown in the equipment with the result that on August 2, with two camps about four miles apart, and with a total population of 13,259, there was only one pumper with a pumping capacity of 500 g.p.m., and it not able to use streams from $2\frac{1}{2}$ " lines. This was only twenty per cent protection.

Arrangements with War Department.

Representations have also been made to the Engineering Division of the United States Army with the result that more adequate equipment has been allotted to the relocation centers than it first specified. At first, no distinction was made between a center for 5,000 people and one for 10,000.

As a result of negotiations with the Army, two fire trucks are to be provided for each center of 10,000 capacity or less, and for a center of more than 10,000 one truck will be provided for each 5,000 capacity beyond

that figure. Details of fire fighting equipment to be provided by the Army are contained in Circular Letter #20, Supplement C, issued by the San Francisco Regional Office on June 17.

Even with the increase in equipment provided by the Army, there is still inadequate protection of all relocation centers. In all cases there should be 2,000 feet of 2-1/2 inch hose for each fire truck; at present, only two fire trucks are thus equipped.

Water Supply and Facilities

Also of prime importance here are two items through which fire fighting facilities are able to function: (1) water supplies and water facilities, and, "2) electric power. In all instances, the quantity of water available appears adequate, perhaps with the exception of Parker, though at Manzanar, serious attention should be given to determine whether source streams might freeze up in the coldest weather.

At two of the centers--Tule Lake and Manzanar--there is a natural water pressure because of the higher elevation from which the water supply is obtained. At other places, however, there is a supplemental water supply obtained from wells which have to be drawn upon rather heavily in certain seasons of the year. At Parker and Gila, it is necessary to create most of the head by use of elevated water tanks.

In all instances, the water systems have been properly gridded and, with the exception of Tule Lake, the fire hydrants are of standard design and construction.

Electric Power

Electric power prominently enters the picture because of its use for pumping. At all the relocation centers electric power is being brought into

the project by a transmission line. A serious fire menace obviously develops whenever the power is cut off, as it was at the Colorado River project when a severe storm struck on the evening of July 22. This event emphasized the importance of having a supplemental water supply available at all times.

Considering the fire menace resulting from the breakdown in power facilities, it is here recommended that special steps be taken to guard against the possibilities of power failures. As a practical plan, it is suggested that tractors at the project be equipped with power takeoffs which can be tied up with belt-driven pumps to supply the necessary water for fire fighting purposes. Whenever water is available in canals, as at the Colorado River and Minidoka Projects, provision can be made for pumping water by draft. Additional fire hose, however, would probably be necessary to use canal water over any considerable part of the town area.

Rubber Rationing

Tight rationing of rubber has made it necessary to purchase single-jacket, rubber-lined hose which cannot be expected to give much more than one year of service except with most extraordinary care. This hose also will have to be used carefully to prevent breaking. Deterioration in the hot, dry climate of the relocation centers will probably reduce its period of usefulness considerably unless reserve hose can be maintained under controlled humidity with ample supplies and facilities for frequent change and servicing. In many other lines the quality of available equipment is much below what was on the market only a few months ago. Replacement, therefore, will undoubtedly exceed the normal rate of the past.

Extinguishers

I should like to hear refer briefly to some errors which I believe have been made in purchasing fire fighting equipment for the projects. These

practices have now been discontinued and I make this reference only because the materials here referred to are still on hand.

At four of the projects -- Manzanar, Tule Lake, Gila and Colorado River -- carbon tetrachloride glass, hand grenade type extinguishers have been placed in brackets on the walls of the barracks and administrative offices. At best this type of extinguisher is of limited use. These are many fire conditions--for example, a fire on a ceiling or in a flue--in which this type of extinguisher would be almost worthless. In confined quarters, it may be dangerous because of the phosgene gas which develops when carbon tetrachloride is exposed to heat. At all centers where these extinguishers are installed the fire departments have been warned to be on the alert for this hazard.

Pyrene extinguishers which also employ carbon tetrachloride have been installed in large numbers at Tule Lake. For some time this was the only type of extinguisher in use. We plan, therefore, to arrange the transfer of this equipment to places where it will be more suitable. An order has been placed for nearly 1,000 5-gallon, pump-type, knapsack extinguishers which, through the plan of block organization for fire fighting, can be used to concentrate a large amount of first aid equipment at any point where needed. At best, however, extinguishers of any type are only of first-aid value and all persons in the centers have been advised against placing too much reliance on them.

Hose Threads and Standardization.

Fire protection engineers have devoted many years to the work of standardizing hose, threads and equipment. Manufacturers were well equipped to produce nozzles, fittings and equipment that were standard and this equipment

was to be found in large quantities in stores and distributed in the field to operating Fire Departments.

When this war started much of the work of the past was discarded by some government agencies, by specifications that made the stocks of fire equipment useless unless special adapters were made, causing delay while waiting for the manufacture of equipment that could be used.

Because of these conditions, before any definite steps can be taken to secure fire equipment, we must receive definite information on all details at each project. We are often unable to use borrowed equipment while waiting for this emergency material.

Some Observations on Project Fires

The fire at Tule Lake Project on August 13, 1942, at 4:40 a.m. in Community Store No. 3 in which a loss of approximately \$3,500.00 was incurred, removes all doubt as to the performance of the Japanese as firemen when they have received proper training. Sixty percent of the original building was saved, notwithstanding delay in transmitting the alarm, due to lack of an alarm system. The writer can heartily agree with Associate Fire Protection Officer, Ernest Rhoads, in his statement: "---I would say that the performance of the firemen was excellent."

This fire, had it occurred at any of the other projects would not have been stopped with as little loss, for the Tule Lake Project is the only project that has equipment for heavy streams.

There have been five fires in Colorado River Project kitchens due to too little clearance between heating equipment and hot-water pipes or stacks, and combustible material. One fire occurred here where heat was transmitted through the metal covering to wooden floors beneath the stoves. The losses

have been nominal due to alertness of personnel, as these fires are anticipated.

Several fires of like nature have occurred at the Manzanar Project where the losses have been nominal.

There have been no fires to date at Gila River Project or Minidoka Project.

V. RECOMMENDATIONS FOR ADEQUATE FIRE PROTECTION

To provide adequate fire protection at all the relocation centers it will be necessary over the next several months to work toward several objectives. Some of the more important of these follow:

The most immediate need is for equipment. There have been unavoidable delays because of the general shortage of materials in many lines. Transportation difficulties have also added to the delay. Some equipment is now in transit.

At the Colorado River Project one additional triple-combination 500-gallon-per-minute pumper is needed at Camp No. 1, which, with two supplied by the USED, will make a total of three; Camps 2 and 3 should each be provided with one additional pumper besides one each to be supplied by USED. There now is but one pumper at Poston, this at Camp No. 1. Two more will be provided very soon and a third is now on order from the East. In addition to fire hose supplied by the USED, the WRA should purchase 6,000 feet of $2\frac{1}{2}$ " hose for the three pumpers listed above, and also 4,000 feet of $2\frac{1}{2}$ " hose for the four pumpers which will be supplied by the USED. Six thousand feet of $2\frac{1}{2}$ " hose and 3,500 feet of $1\frac{1}{2}$ " hose have been requisitioned.

At Tule Lake, the USED will supply three triple-combination pumpers, two of which are second hand equipment now on the project. One additional pumper with 2,000 feet of $2\frac{1}{2}$ " hose is needed.

At Manzanar, there is now one triple-combination pumper and 1,000 feet of $2\frac{1}{2}$ " hose and 300 feet of $1\frac{1}{2}$ " hose. Another pumper will be supplied by USED with 1,000 feet of $2\frac{1}{2}$ " hose. For supplemental purposes there should also be added to the Manzanar equipment a 500-gallon-per minute- pumper with a 200-gallon water tank, and equipped to carry 1,000 feet of $2\frac{1}{2}$ " hose and 200 feet of $1\frac{1}{2}$ " hose. Reserve hose equipment should be 3,000 feet of $2\frac{1}{2}$ " hose and 700 feet of $1\frac{1}{2}$ " hose, together with fittings.

At Gila, the USED has agreed to provide three 500 GPM triple combination pumpers for fire protection, two to be stationed at Camp 2 and one at Camp 1. At this time there is one piece of apparatus at Camp 1. What incidental equipment this pumper has was not known at the time this report was written.

To provide adequate fire protection at Gila, in my opinion, one more pumper must be furnished for each of the two camps.

The above recommendations cover the major needs in the way of large equipment, but do not include such small equipment for which we are attempting to arrange procurement in the near future.

(signed) William E. Hoffman

WAR RELOCATION AUTHORITY
WASHINGTON

Fire Control Div.

March 13, 1943

Merritt
Cc B Brown
" " For

Mr. Ralph P. Merritt
Project Director
Manzanar Relocation Center
Manzanar, California

SUBJECT: Fire Inspection March 8 to 13, 1943
inclusive

Conditions found during this inspection are satisfactory considering conditions and limitations under which the Fire Department operates with the following exceptions:

HOSPITAL SPRINKLER SYSTEM

A dry type sprinkler system has been installed in the Hospital since my last inspection, equipped with two indicator-post valves, sprinkler alarm and also low pressure alarm. This sprinkler system has no steamer connections to allow the Fire Department to pump into the sprinkler system in event of a large fire. Owing to the fact that only 8 units and the covered walks are sprinkled and 6 units unsprinkled, it would be quite possible for a large fire to gain headway that could not be extinguished during its incipency by the automatic sprinkler system. This, together with the low water pressures averaging between 25 to 30 pounds per square inch at the Hospital, makes it quite important that additional water supply for sprinklers be provided by Fire Department steamer connections equipped with check valves located near each dry valve.

Push buttons should be provided in each ward and in the kitchen so that an alarm may be transmitted to the administrative staff.

WATER SUPPLY

The present water supply derived from Shepard's Creek flows into a 500,000 gallon settling basin at an elevation of 4,100 feet. This flows to a 93,000 gallon tank at an elevation of 3,994 feet. The

14/30

Hospital and the upper end of camp has an elevation of 3,940 feet, giving a minimum headway of 54 feet from the base of the tank to furnish the water pressure for the upper end of camp which is insufficient. There is no provision to by-pass the water around the 93,000 gallon tank which would give it an additional 106 feet of headway which would increase the water pressure at the Hospital to a maximum pressure of approximately 79 pounds per square inch and a maximum pressure of approximately 108 pounds per square inch at the Fire Station.

FIRE STATION

The present Fire Station is not satisfactory and consideration should be given to selecting of a new site for the Fire Station more centrally located if present quarters can be used for other purposes.

1. The present station is inadequate to possibly house three pieces of apparatus consisting of two pieces of triple-combination fire trucks and one half-ton hosewagon.
2. Insufficient room for dormitory and assembly room and no showers or latrines.
3. Quarters for fire alarm board and operators who will be on duty 24 hours a day will be needed.
4. The administrative office should be moved to the Administration Building.
5. Cement floors do not have smooth finish to protect fire hose from chafing.

FIRE HYDRANTS

A number of fire hydrants throughout the Project are facing the wrong direction and in several cases they are obstructed by poles that considerably interfere with their use by fire apparatus. These should be corrected without further delay.

ADMINISTRATIVE BUILDING

The construction of partitions in the Administration Building has added considerably to the fire and life hazards. Consultation should be held with the Fire Protection Officers to eliminate as many of the hazards as possible. Fire drills should be planned, and plans made for evacuation of records and personnel.

A safe storage for janitor's supplies and equipment should be provided.

PUBLIC ASSEMBLIES

All public assemblies should be required to receive a permit from the Fire Protection Officers who shall specify the terms under which the assembly may be held.

Motion pictures are being displayed under conditions that are dangerous. The above provision should eliminate this hazard.

FIRE REPORTING TELEPHONES

There are no fire reporting telephones at present but the latest approved plan for the telephone system will give full coverage to the center, making a telephone available at approximately one block distance from any part of the center. This should be expedited as much as possible.

KITCHENS

In the kitchens which have been lined with plasterboard, there should be provided a fire-stop or bulkhead at the termination of the plasterboard. The area above the door leading to the boiler room should also be sealed over.

This is to prevent a fire from extending under the roof to other parts of the building.

William E. Hoffman
Fire Protection Adviser

cc: Mr. R. B. Cozzens

WAR RELOCATION AUTHORITY
Washington

August 7, 1943

Mr. Ralph P. Merritt
Project Director
Manzanar Relocation Center
Manzanar, California

SUBJECT: Fire Inspection August 4, 5, 6 & 7, 1943

Conditions throughout the Center appear to be generally good in matters of fire protection. The work of the Fire Protection Officer and his assistant in training the Fire Marshals in their duties of fire protection and inspection is to be commended. It is believed that the low fire records of this Project is due primarily to this type of work in coordination with the fire-fighting forces.

The addition of the Dodge 500-gallon triple combination pumper completes the amount of fire apparatus to be supplied by the Army in accordance with earlier agreements. However, there is still a lack of a fire reporting telephone system to be supplied under the terms of this agreement.

FIRE REPORTING TELEPHONES

During this inspection a trip was made to Bishop to the Office of the Interstate Telegraph Company to investigate conditions which resulted in the cancellation of the contract for installation of fire reporting telephones at the Manzanar Project.

The records at the Manzanar Project contained no communications from the Army Signal Corps or United States Engineers regarding cancellation of this system nor had there been any conversation to the authority of the Manzanar Project from any of the above parties indicated, such action was contemplated. A copy of a letter from Headquarters, Ninth Service Command, Commanding General, Presidio of San Francisco, dated May 5, 1943, to the Interstate Telegraph Company in Riverside, California, Attention Mr. Albert Gage (Re 483.2 Manzanar) (SIG) is quoted here:

"Recent directives from the War Department have changed the fire reporting, guard and administrative telephone requirements for Alien Internment Camps.

"It is requested that this headquarters be advised as to the present status of the installation of the fire reporting telephone system at Owens Valley Reception Center, Manzanar, California. This should include work done, material on hand and on order with approximate date of delivery also material required but for which orders have been placed.

"Construction on this installation is to be deferred until further notice."

This copy was received by me from Mr. Morrison of the Bishop Branch of the Interstate Telegraph Company on August 6, 1943

From the contents of this letter it is apparent that Captain Holcombe in the Signal Corps was not altogether clear on the status of the War Relocation Authority which he apparently confused with Alien Internment Camps and it is my belief that this matter is brought to the attention of the War Department in Washington, D.C. that an adjustment will be made which will result in the immediate installation of a fire reporting telephone system at the Manzanar Relocation Center. Mr. Morrison of the Interstate Telegraph Company at Bishop states that the company has been granted a priority of AA-5 which has no expiration date and all of the materials with possibly minus a few minor items are on hand and are waiting the order to proceed with the above mentioned installation and that perhaps the entire system could be completed in six weeks after receipt of order to proceed with the installation.

FIRE STATION

Since the addition of the second piece of apparatus in the Fire Station there is insufficient space to properly quarter and house the crews necessary to operate such equipment in a sanitary manner.

The Fire Station is unlined and no provisions for heaters of sufficient capacity to prevent the

freezing of fire apparatus has occurred during the past winter. It is recommended that either sufficient additions or alterations to present station be made to provide for proper protection and heating of fire apparatus and housing personnel or that the Fire Station be moved to a more central location where proper facilities can be installed.

WATER SUPPLY

From the information received, additional water supply is necessary or the domestic consumption curtailed. The records from the Public Works show that the average per capita of the month of July was 212 gallons. It is evident that this robs the west part of the Center of sufficient water flow for the Fire Department. With this high consumption of water and the fact that there is only one well for the auxiliary supply of water, another means of obtaining water should be secured to augment the supply in case of failure.

MILITARY POLICE

The Military Police should be instructed in the use of the auxiliary fire-fighting equipment as a means of combating fire in their own quarters, which could be done by arrangement with the Commanding Officer of the Military Police Camp.

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WAR RELOCATION AUTHORITY
Washington

Fire Control Div.

December 1, 1943

Mr. Ralph P. Merritt
Project Director
Manzanar Relocation Center
Manzanar, California

SUBJECT: Fire Inspection November 29 to December 1,
1943 inclusive

During this inspection details of the new WRA Handbook of Fire Protection, Section 40.4 has been discussed with Fire Protection Officers and other Center personnel. Fire Protection problems in general have also been discussed with proper Section heads.

FIRE REPORTING TELEPHONES

Investigation was made of the proposed installation of fire reporting telephones to be installed by Interstate Telegraph Company under contract with the U. S. Signal Corps. The number of fire reporting telephones having been cut to 21 from the original plans and these to terminate at the regular Center PBX. Ruby lights were also to be provided as a separate item.

Due to the limited capacity of 30 circuits on the present PBX and the fact that 29 of these circuits are now in use and changes are now being made to use the 30th circuit, there is no place on present PBX for termination of fire reporting telephones.

The Interstate Telegraph Company is aware of this fact and state that in order to install these fire reporting telephones in accordance with the existing orders, it would be necessary to replace the present PBX board with a new board having a capacity of perhaps 50 circuits. They state also

that it will require at least one year, perhaps much longer, before a new board can be obtained.

Notwithstanding these facts, they contemplate starting installation of outside work on the fire reporting telephone system immediately in order to avoid cancellation or delaying of this order. Any work performed on present system without an adequate switchboard would be wasted, therefore, I have suggested that delaying order be issued to prevent immediate installation and give us time to prepare plans for installing a system with our own workmen and from materials purchased with a priority that should be transferred from the Interstate Telegraph Company to the WRA.

The contract price for installing outside work only, is \$2500 and this installation would not be the property of WRA; we should have to pay rental charges upon this equipment and also removal charges when this Center is dissolved. The \$2500 is not the price of the complete system.

Electrical Engineer, Ralph Feil, states that if he can get the priority at present assigned to the Interstate Telegraph Company, he can obtain necessary materials for the installation of this system and improvise a switchboard at the Fire Station that will meet our requirements, at least until adequate board can be obtained. He states that the entire cost of such a system, installed by WRA, would cost about \$1500 complete and would require about two weeks for installation, using evacuee labor.

If such a system is installed, it would be the property of WRA and there would be no rental charges or excessive removal charges when this Center is dissolved.

Mr. Feil is preparing detailed plans for such a system which will be transmitted to Washington as soon as possible for approval and an attempt to obtain the necessary transfer of priority required for making this installation.

He is also preparing an alternate plan using push-buttons and annunciators to be used in lieu

of telephones if it should be impossible to obtain telephone instruments for the first proposal. I would want to see detailed plans of the alternate proposal before approval. I believe that even this would be substantial improvement over the conditions at present proposed by the Signal Corps. The need of a fire reporting system at this Center is more urgent now than ever and steps should be taken to obtain a workable system of some kind at the earliest possible moment.

EVACUEE FIREMEN

This Center has received the job descriptions for members of the evacuee Fire Department, setting up standard titles, salaries, etc., but has not received the latest quota on number of evacuee Fire Department personnel allowed this Center, as was approved in September, 1945 by the Washington Office. They are at present working on proposed list dated July 10, 1945 which reduced the personnel of the evacuee Fire Department personnel to 31, which is inadequate to properly protect this Center from fire.

The titles as shown on this list is not in accordance with the job titles in the job description. Information has been given to the Personnel Section of the correct titles and number of positions as approved by the Washington Office, which totals 57 for this Center. I recommend that communications be forwarded to Washington Office to obtain the latest approved list and if by chance there has been an error in allowances for this Center that corrections be made in accordance with the list in Fire Protection Adviser's Office.

FIRE STATION

I have reviewed the plans and location of the proposed new Fire Station. If this Center is not among the first of the Centers to be closed, I recommend that these plans be approved.

SIREN

A used siren has been located by the Center that I believe will amply meet requirements. It can be purchased without priority. I approve the installation of such siren.

A number of other matters pertaining to oil stoves, fire extinguishers, etc., have been discussed in detail and is not believed necessary to detail these items in this report.

William E. Hoffman
Fire Protection Adviser

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UNITED STATES
DEPARTMENT OF THE INTERIOR
WAR RELOCATION AUTHORITY
Washington

March 31, 1944

Mr. Ralph P. Merritt
Project Director
Manzanar Relocation Center
Manzanar, California

SUBJECT: Fire Inspection - High School Auditorium

Dear Mr. Merritt:

I have this date inspected the plans for the new High School auditorium and the building now under construction. This inspection reveals that the building now planned will not be safe for public assemblies for the following reasons:

1. HEATING EQUIPMENT

- A. The building is to be heated by four separate heaters.
- B. Two of these are under the stage and on the auditorium side of the rooms on this level and the only entrance to such heating rooms is through the dressing rooms. These heaters will be set on a concrete floor laid on the ground.
- C. Two heating rooms are located on the west portion of the building, one on the north side and the other on the south side. Each of these heaters are set on wooden floors on the structures adjoining the auditorium proper and having the only entrance to the heating rooms from the inside of the building.
- D. It is recommended that all heaters be installed as follows:
 1. That the heater room be moved to the outside portion of the building. All floors of heater rooms to be concrete laid upon the ground.

2. The only entrance to these rooms shall be from the outside of the building and have doors that open outward.
3. That heat ducts connecting the heaters to the auditorium shall be constructed of asbestos board or other materials approved by WRA regulations and/or official text-books, with no combustible materials inside such ducts.
4. That these heater rooms be sealed with either,
 - (a) Asbestos board
 - (b) Fire-proof Gypsum board (not ordinary variety)
 - (c) Asbestos cement plaster on chicken wire
5. The clearance around the heaters should be at least 18 inches on each side, with suitable space and asbestos insulation over heater at junction to duct.
6. Fuel oil tanks should be placed suitable distance from building with outside and inside shut-off valves on oil lines.

2. PROJECTION ROOM

The present plans for the projection room will be safe ONLY for the showing of safety film.

In order to use nitro-cellulose film the following changes must be made to provide a fair degree of safety; these changes do not meet the standards for projection rooms and are suggested as a minimum requirement due to inability to obtain materials required for standard projection rooms.

- A. The projection room should be separated from the rewinding room by a partition constructed in the same manner as other walls in this room as here provided. A door opening from the projection room swinging into the rewinding room should be provided. This door to be completely covered on both sides with asbestos board and provided with weights on metal cables for self closing.

- B. The inside walls of the projection room and rewinding rooms shall be lined with asbestos board, including all exposed parts of projection and observation ports.

The space between such walls shall be completely filled with a satisfactory non-combustible insulating material, including an equal thickness of this material over the ceilings of these rooms.

A safety door, as above described, shall be provided to the present stairs and exit, leading to the auditorium floor.

A vent leading from the projection room to not less than four (4) feet above any combustible material within 15 feet of such vent. Said vent to be constructed of non-flammable materials, preferably metal or asbestos board with adequate protection where these pass through ceilings or roof, in accordance with the provisions of WRA regulations and official text-books.

The diameter of the vent shall not be less than 18 inches or equivalent area. A suitable damper shall be installed in the vent, equipped with a fusible-link and so arranged that the damper will open when the temperature rises to 165° F.

Suitable shutters shall be installed on projections and observation ports, equipped with fusible-links and so arranged that they will close when the room temperature rises to 165° F.

Any window in such rooms shall be in metal frames with frosted wire glass. Artificial light and ventilation is preferred.

An exit door, opening outward from the rewinding room shall be provided together with a suitable escape ladder or stairway so arranged that it will not be necessary to pass thru projection room to escape.

Sincerely,

William E. Hoffman
Fire Protection Adviser

cc: Mr. R. B. Cozens

MANZANAR RELOCATION CENTER
Manzanar Fire Department
Manzanar, California

REPORT
ON
FIRE MARSHALS

November 3, 1942

Submitted by

R.A. Kubota
Fire Chief

Approved by

Frank E. Hon
Fire Pro. Officer

FIRE MARSHALS

In October of 1942, Frank E. Hon, Fire Protection Officer, organized the Fire Marshals in the Manzanar Reeducation Center, Manzanar, California. This organization was set up with the purpose of teaching the people and practicing the principles of fire prevention within the center in the shortest possible time.

The Fire Marshals are paid positions and their duties are assigned by the Fire Protection Officer, (see enclosed duties). They were selected by the Block Managers of the Blocks of which they are in charge. Older men with outstanding intelligence, personality and a good understanding of English and Japanese language were chosen. There are ten Fire Districts, eight consisting of four Blocks, one of two Blocks, and one of two Blocks and the Hospital, (see enclosed map). A Fire Marshal is in charge of each District.

A meeting was held which was attended by the Fire Marshals and the Block Managers and presided by the Fire Protection Officer. The various methods of fire prevention and uses of extinguishers were discussed. It was decided that the Fire Marshals work in cooperation with the Block Managers. Any violation of regulations is to be written in the Fire Marshal's report and also reported to the Block Manager, who, in turn will tell the occupants of said violation and to have it corrected immediately. The Marshals are to check this violation and if corrected, to put it in his report as corrected. If not corrected, the Fire Marshal and the Block Manager are to go to the occupants and warn them of the violation. The Fire Marshal is to recheck this violation again and if still not corrected, to report this matter to the Fire Protection Officer. The Fire Protection Officer will go in person and see the violator and ascertain when the violation will be corrected. If the violator will not cooperate with the Fire Department the violator will be reported to the Police Department and steps will be taken to correct it.

Two days later a second meeting of the Fire Marshals was held and specific instructions were given in the writing of their reports in their note book which were furnished to them. They are to write in their reports the number of daily inspections of apartments or buildings. The type of violations and their location are to be listed and totaled daily. If a second notice of a violation is necessary it must be indicated as such. Corrections of violations must be listed and totaled daily.

The Fire Marshals duties and the rules and regulations pertaining to such items as electric drop cords, rubbish under or against the house, oversized awnings, use of stoves, building on or between the barracks and etc. were discussed thoroughly. The uses of extinguishers were again discussed and the Marshals were questioned of its various uses.

The Marshals were instructed to report to the Fire Protection Officer every Saturday morning and a check is made on their reports. The progress that they make is recorded in the Chief's Daily Journal.

A Fire Brigade consisting of fourteen or more men, one from each building, is to be formed by the Marshals. Fire Brigades have already been formed in several of the Blocks. Then a general compulsory Block meeting will be held and the problem of drills, evacuation, and extinguishment will be discussed. Specific duties will be assigned to each member of the Fire Brigade. One man will bring a ladder, 2 men garden hoses, and the rest extinguishers. One red fire ladder will furnished to each of the Blocks. This ladder to be used only in case of fires. A fire drill will be held in each Block simulating a real fire. The Fire Brigade will convene to the location of the fire with their fire extinguishers, garden hose and ladders. A man will be sent to the Fire Department either on a bicycle or a car to report the fire. The women and children will be evacuated to the fire breaks, going against the wind. The Fire Department will respond and hose will be laid just as in a real fire. By this procedure a test can be made on the actions of the Fire Brigade, the occupants, especially the children, and the firemen.

To date, the work of the Fire Marshals has gone on very smoothly and efficiently. The camp conditions have improved very noticeably due to the Marshals good work and vigilance. The cooperation of the people has been very good. The people in the center are getting more and more fire conscious. We believe that with the Fire Marshals, Fire Brigades, and Firemen, we have the best possible fire prevention and extinguishment system of any center.

Mr. Ralph P. Merritt, Project Director
Manzanar Relocation Center
Manzanar, California

SUBJECT: Fire Inspection, High School Auditorium

Dear Mr. Merritt:

I have this date inspected the plans for the new High School auditorium and the building now under construction. This inspection reveals that the building now planned will not be safe for public assemblies for the following reasons:

HEATING EQUIPMENT

- A. The building is to be heated by four separate heaters.
- B. Two of these are under the stage and on the auditorium side of the rooms on this level and the only entrance to such heating rooms is through the dressing rooms. These heaters will be set on a concrete floor laid on the ground.
- C. Two heating rooms are located on the west portion of the building, one on the northside and the other on the southside. Each of these heaters are set on wooden floors on the structures adjoining the auditorium proper and having the only entrance to the heating rooms from the inside of the building.
- D. It is ^{all} recommended that ~~the~~ heaters ~~under the stage~~ be ^{insulated} ~~constructed~~ as follows:
 1. That the heater room be moved to the outside portion of the building ~~under the stage in the location of the present dressing rooms.~~ ^{all floors of heater rooms to be concrete, laid upon the ground.}

2. The only entrance to these rooms shall be from the outside of the building and have doors that open outward.
3. That heat ducts connecting the heaters to the auditorium shall be constructed of asbestos board or other materials approved by WRA regulations and/or official textbooks, with no combustible materials inside such ducts.
4. That these heater rooms be sealed with either,
 - (a) Asbestos board
 - (b) Fire-proof Gypsum board (not ordinary variety)
 - (c) Asbestos cement plaster on chicken wire.
- ~~5. These heater rooms to be constructed in accordance with the details outlined for heater rooms under the stage.~~

5. The clearance around the heaters should be at least 6" on each side, with suitable space and asbestos insulation over heater at junction to duct,
6. Fuel oil tanks should be placed suitable distance from building, with outside + inside shutoff valves on oil lines

PROJECTION ROOM

2. The present plans for the projection room will be safe ONLY for the showing of safety film.

In order to use nitro-~~cellulose~~^{cellulose} film the following changes must be made to provide a fair degree of safety; these changes do not meet the standards for projection rooms and are suggested as a minimum requirement due to inability to obtain materials required for standard projection rooms.

- A. The projection room should be separated from the rewinding room by a partition constructed in the same manner as other walls in this room as here provided. A door opening from the projection room swinging into the rewinding room should be provided. This door to be completely covered on both sides with asbestoss board and provided with weights on metal cables for self closing.
- B. The inside walls of the projection room and rewinding rooms shall be lined with asbestos board, including all exposed parts of projection and observation ports.

The space between such walls shall be completely filled with a satisfactory non-combustible insulating material, including an equal thickness of this material over the ceilings of these rooms.

A safety door, as above described shall be provided to the present stairs and exit, leading to the auditorium floor.

A vent leading from the projection room to not less than four (4) feet above any combustible material within 15 feet of such vent. Said vent to be constructed of non-flammable materials, preferably metal or asbestos board with adequate protection where these pass through ceilings or roof, in accordance with the provisions of WRA regulations and official text-books.

The diameter of the vent shall not be less than 18 inches or equivalent area. A suitable damper shall be installed in the vent, equipped with a fusible-link and so arranged that the damper will open when the temperature rises to 165° F.

Suitable shutters shall be installed on projections and observation ports, equipped with fusible-links and so arranged that they will close when the room temperature rises to 165° F.

Any window in such rooms shall be in metal frames with frosted wire glass. Artificial light and ventilation is preferred.

An exit door, opening outward from the rewinding room shall be provided together with a suitable escape ladder of stairway so arranged that it will not be necessary to pass thru projection room to escape.

cc Mr. Coggins