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FINAL REPORT SEPTEMBER 1970

H O U S I N G S T U D Y

for

GARFIELD COUNTY

by

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COLORADO STATE PLANNING OFFICE
URBAN PLANNING GRANT CONTRACT

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C O N T E N T S

INTRODUCTION 1

HOUSING CONDITIONS - 1960 - COLORADO, WESTERN MOUNTAIN
REGION, AND GARFIELD COUNTY 3

HOUSING CONDITIONS - 1969 - GARFIELD COUNTY 5
Methodology 5
County-wide Housing Evaluation 5
Housing Conditions by Study Area 7
Mobile Homes 8

HOUSING PROJECTION - 1970-1990 - GARFIELD COUNTY 9
Population Projection 9
Housing Requirements Based on Population Growth 9
Housing Requirements Based on Replacement and Remodeling of
Existing Structures 9
Total Housing Requirements - 1970-1990 10

HOUSING DETERMINANTS 10
Housing Constructed in Garfield County 1950-68 10
Recent Single-Family Dwelling Construction 10
Economics of Single-Family Housing 10
Federally Assisted Housing 11
Components of New Housing Cost 13

RECOMMENDATIONS 14

INTRODUCTION

The initial portion of this report includes an evaluation of the condition of existing dwellings in the County. While such an investigation is necessary to detect and propose remedies for unfortunate situations, it also leads to understanding of how the housing inventory is expanded. Thus it relates directly to the second section of the report, an estimate on the extent and character of future housing.

The housing study is an intriguing undertaking. Historically speaking, it records the civilization of a wilderness, particularly in this area, which was a frontier only one hundred years ago. The inventory of surviving dwellings provides a physical picture of the aspirations and achievements of the earlier generations who settled and developed Garfield County. Architectural configuration of housing and its relationship to the land is the product of social, economic and environmental determinants. There is a logical basis for the contrast between the victorian dwellings on small lots in New Castle and Glenwood Springs built by early inhabitants employed in mining, railroading and commerce and the early American log and frame dwellings laid out in a more spacious manner in Carbondale, Silt, Rifle and Grand Valley. The latter communities were agriculturally oriented and located on alluvial fans in contrast to the narrow valley character of New Castle and Glenwood Springs. The chronologic order of development is visible in the transition from the early architecture described above to the two-storey frame or masonry dwelling of the 1920 era, the bungalow constructed in the 1930's, and the one-storey open floor plan type house of the post-World War II period to the varied architecture of the present day, including mobile homes. The housing built during a particular period is an accurate reflection of the life-style of that time; a pattern influenced by cultural background and social aspirations, physical determinants such as topography, transportation and availability of building sites and materials with all of the foregoing strongly influenced by economics.

Following evaluation of existing dwellings is a projection of housing needs over the next twenty years or until County population expands from its present 14,568 to 19,500 persons. The projection of absolute growth is less important than the character of the expanding urban/suburban environment. People will find a place to live; shelter is one of the basic human requirements along with food, clothing and medical care. Just as socio-economic factors shaped the character and configuration of the existing housing inventory, housing of the future will be determined by individual preference interacting with the economic facts of life. A person born in 1931 would require extensive additional research to fully understand the historic economics that shaped the present micro-environment of housing. But even a limited comparison of present conditions with those of the past leads one to wonder if the historic patterns of housing development have ever been so subject to the pressures for change as they are at the present time. The residential concept prevalent in this country since its inception as a nation, that of a house on its own lot, a miniature estate in effect, is being modified. There is increasing acceptance of a moveable dwelling in a rental situation, the mobile home. In comparison, this is akin to the

life style of the Plains Indians who moved their lodges in response to hunting conditions; the economic determinant of their time. Many mobile home dwellers live as they do in response to demands for mobility in relation to economic opportunity as the Indians did or by reason of choice based on convenience and ease of maintenance. A great proportion of mobile home dwellers, however, reside in such a fashion due to the character of the local housing market. There is a lack of new single family housing for rent or sale and the economics of home building are placing it beyond the reach of a majority of families seeking housing. Thus for many newly forming households in the County and those immigrating in response for economic opportunity, the choice is limited to mobile homes or rental of an apartment or older dwelling if available. The last section of this report deals with the determinants responsible for the imbalance in the housing market and outlines possible solutions to the problem.

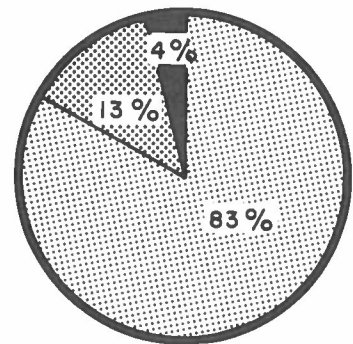
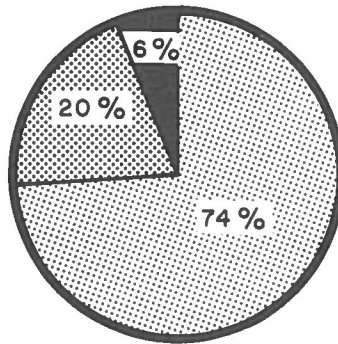
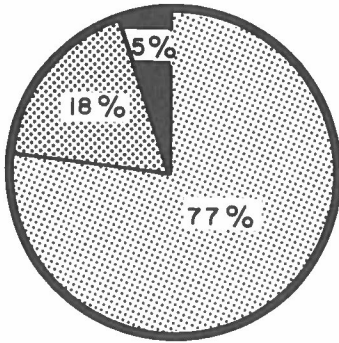
Presentation of this study may appear to some as a "firm grasp of the obvious" but it is an attempt to set forth the conditions, problems and opinions on remedies so that everyone will have a better understanding of the housing situation. Each area of inquiry and recommendation could benefit from additional research and analysis if the County and Nation are concerned about how people live.

HOUSING CONDITIONS - 1960 COUNTY, REGION AND STATE

LEGEND: SOUND 

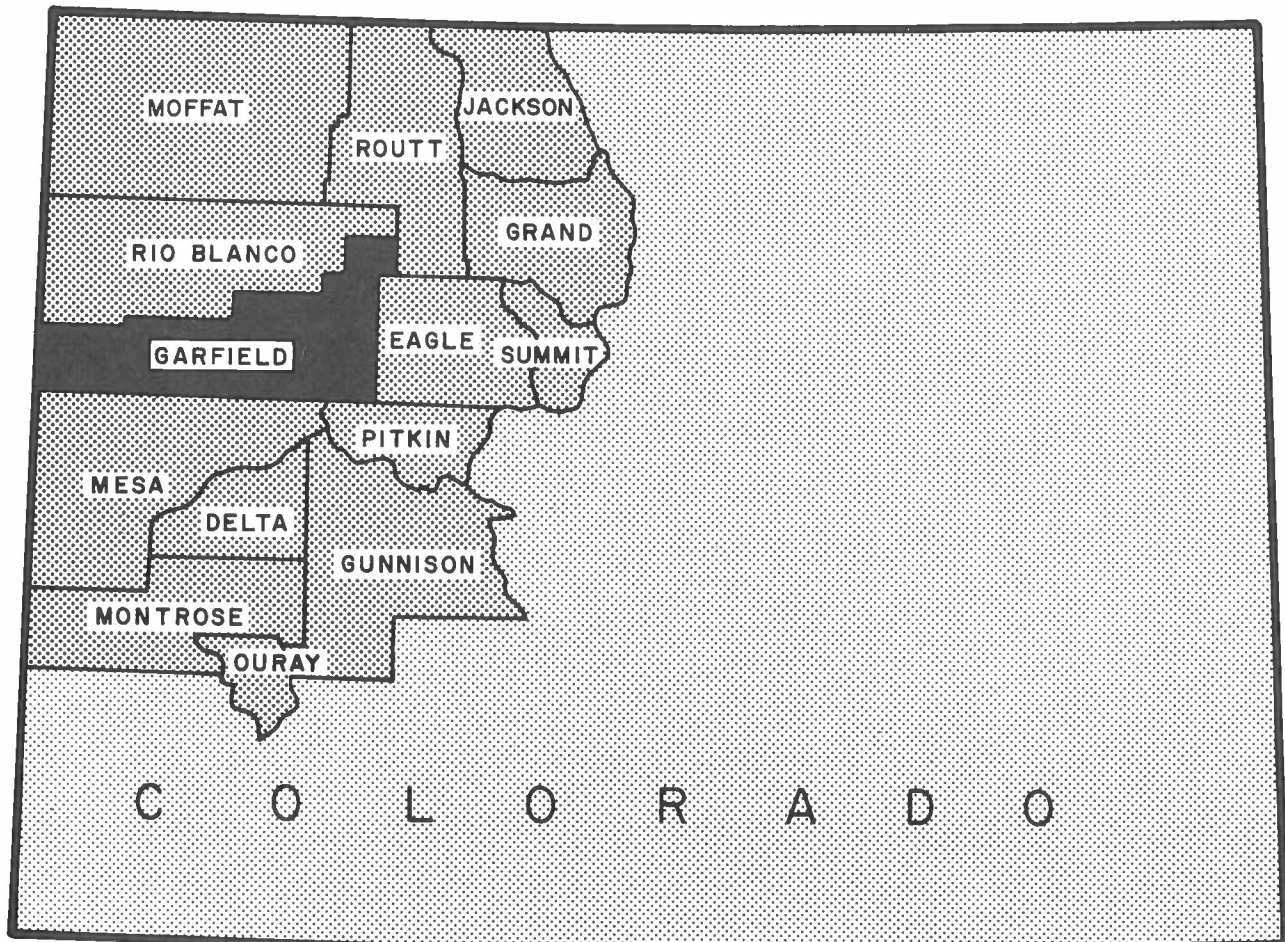
DETERIORATING 

DILAPIDATED 



GARFIELD COUNTY WESTERN MT'N. REGION

COLORADO



HOUSING CONDITIONS - 1960 - COLORADO, WESTERN MOUNTAIN REGION, GARFIELD COUNTY

During the 1960 census, nearly 600,000 Colorado dwelling units were evaluated as to their habitable condition. About 50,000 of these units were located in the fourteen-county Western Mountain Region, and some 4,600 were situated in Garfield County. Condition was determined by the observation of weather-tightness, extent of disrepair, hazards to the occupants' physical safety, and inadequate original construction. Hidden defects such as rotted beams and inadequate wiring were not considered.

The Bureau of Census established three qualitative classifications to indicate housing conditions; "sound", "deteriorating", and "dilapidated". The "sound" rating included structures which had no defects or only slight defects normally corrected during the course of regular maintenance. A "deteriorating" status was assigned to those residences which were in need of more repair than would be provided for through regular maintenance; and a structure which did not provide safe and adequate shelter was classified as "dilapidated".

The accompanying graph compares the results of the 1960 census. Housing in Garfield County (77% sound) was generally better than housing in the Region (74% sound) but not up to the State characteristic (83% sound). Considering the Region in relation to the State in 1960, we are looking at an area which is largely rural in character (68% of the population in towns of less than 2500 or in rural areas for the Region vs. 26% in similar habitats on the state level); and area with a slower rate of population growth (10% for the Region vs. 32% for the State between 1950 and 1960) and with a greater proportion of poor people (25% with a 1960 income of under \$3,000 vs. 18% in a similar situation in the State). While few consistent conclusive correlations between these relationships and housing conditions are apparent, (as will be explained below on a smaller scale), the combined impact of these factors results in an environment where housing conditions could reasonably be expected to be below the state-wide condition, especially a state dominated by a vigorously expanding major metropolitan area - the Fort Collins to Pueblo axis, including Denver.

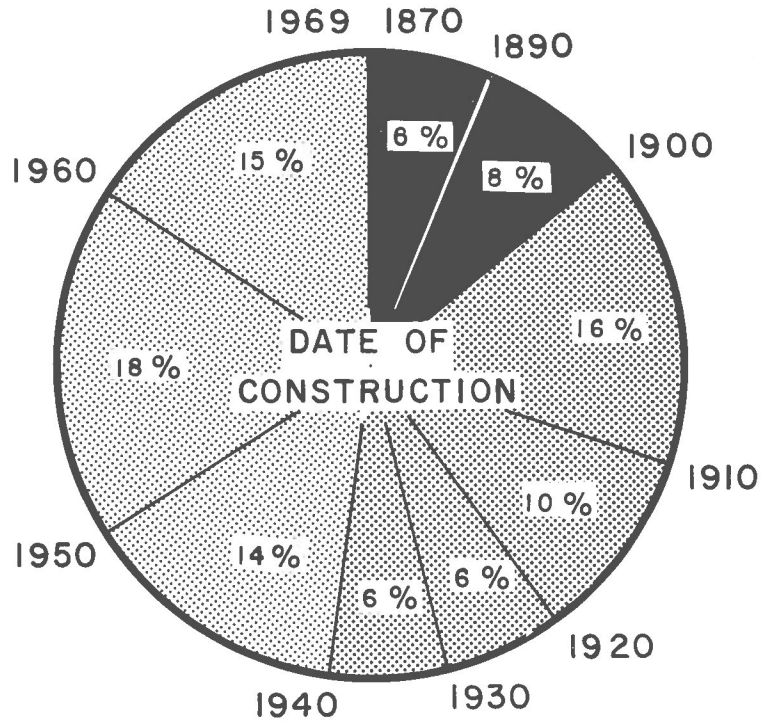
Considering Garfield County in relation to its neighboring counties within the 14-county Western Mountain Region, as of 1960, Garfield County ranked evenly with Mesa and Rio Blanco Counties in having the highest proportion of sound housing within the Region, 77%. Direct correlation between the previous 10-years' population growth and housing conditions exhibited a trend but the experience of Summit County, which had the greatest population growth (83%) and the third highest proportion of deteriorating and dilapidated housing (34%) is contrary to the general trend, (see Table I). Garfield and Rio Blanco had relatively lower rates of population expansion between 1950 and 1960 (3% and 9% respectively) than Moffat and Montrose Counties (19% and 20% respectively), while the former pair had significantly better housing conditions. Table I ranks the 14-counties first in descending order of percentage of deteriorating and dilapidated housing and then in descending order of percentage of families with an annual income of under \$3,000. The State and Region characteristics are also included. A more direct relationship is apparent. Nine of the 14 counties and the State and Region were within 10 percentile points on the two scales, and Garfield was consistent with 23% in each category.

TABLE I
(source: U.S. Census of Population & Housing - 1960)

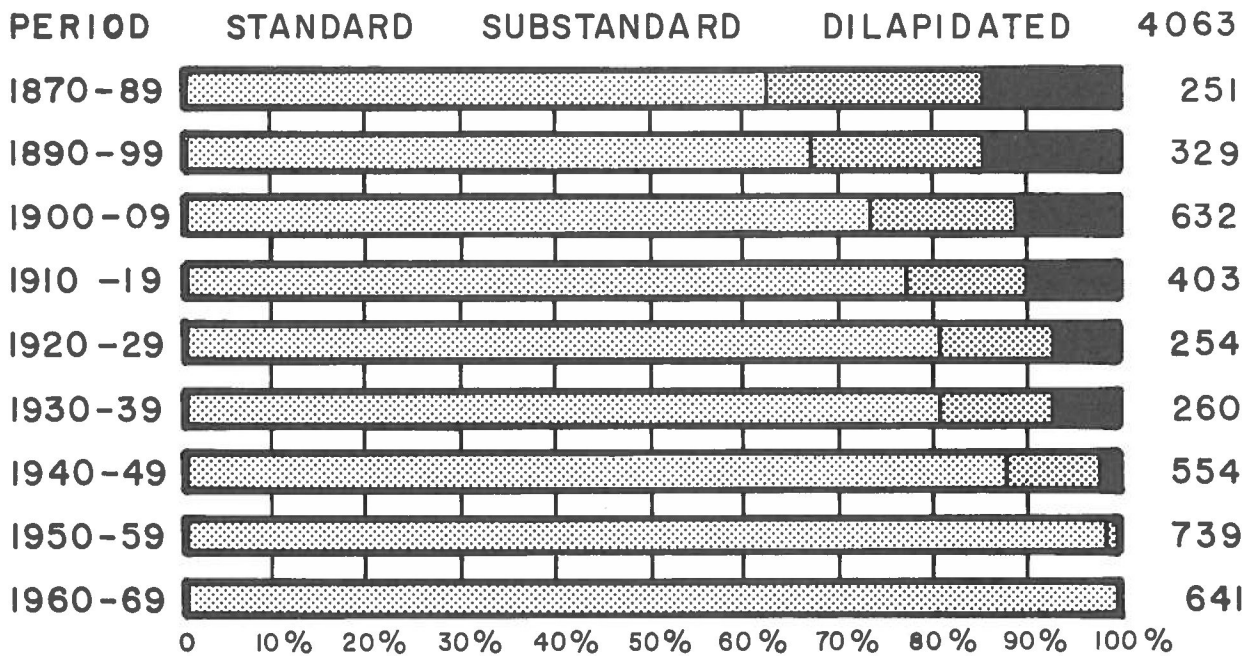
% Deteriorating and Dilapidated Housing		% Families under \$3000 Annual Income	
Ouray	45%	Delta	40%
Moffat	35%	Ouray	33%
Summit	34%	Routt	30%
Eagle	34%	Montrose	30%
Jackson	32%	Eagle	27%
Gunnison	30%	Gunnison	26%
Montrose	28%	WESTERN MTN. REGION	25%
Grand	27%	GARFIELD	23%
WESTERN MTN. REGION	26%	Mesa	21%
Routt	25%	Pitkin	20%
Delta	25%	Grand	18%
Pitkin	24%	COLORADO	18%
Mesa	23%	Rio Blanco	16%
Rio Blanco	23%	Jackson	13%
GARFIELD	23%	Moffat	13%
COLORADO	1.7%	Summit	10%

Housing conditions in Garfield County as of 1960 were judged to be equal to those in Mesa and Rio Blanco Counties and generally superior to the remaining 11 counties. While it is obvious that housing conditions are directly related to income, especially the percentage of low-income families, there are additional influential factors including the pattern and chronology of historical development, the character of the economy including its diversification and labor force composition, the life-style of the inhabitants and as an underlying determinant, the land form and environment of the County. Only the presence of these factors can explain the statistical variations exemplified by Summit County with a high rate of growth, high income and poor housing, and Delta County with a net population loss between 1950-60 and 40% low-income families, yet exhibiting 75% sound housing conditions. Apparently growth does not universally represent progress and conversely progress is not totally dependent upon expansion of the urban environment.

HOUSING AGE AND CONDITION - 1969 GARFIELD COUNTY



CONDITION BY AGE



HOUSING CONDITIONS - 1969 - GARFIELD COUNTY

METHODOLOGY

The preceding analysis was based on the only complete inventory of housing for the State and Region, the 1960 Census. Detailed information from the 1970 Census is not available at this time. Information on housing in Garfield County was available from the records of the County Assessor's Office. The information contained herein was gathered in 1969.

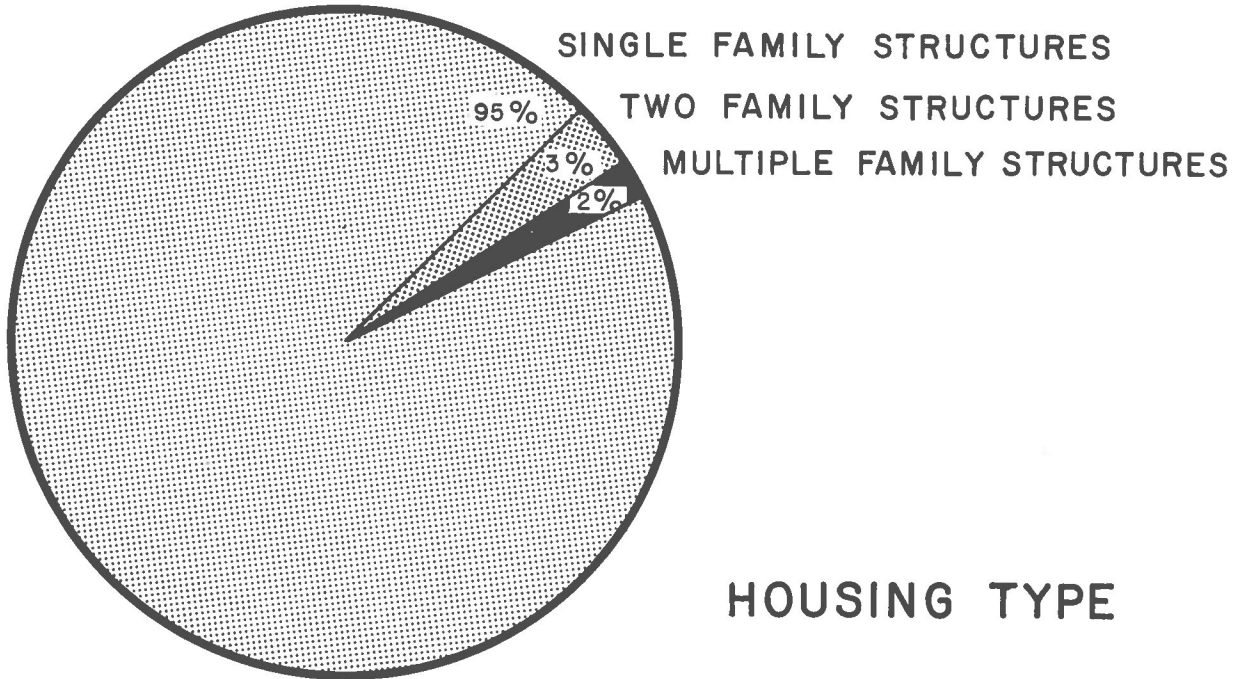
The Assessor's Office evaluated structures on a numerical scale representing the remaining value of the structure. This information is entered on an indexed card along with a picture of the structure. For purposes of this report, the numerical rating of the assessor was translated to an alphabetical scale of "A" - above average; "B" - average; "C" - below average; and "D" - dilapidated. For analytical purposes, these classifications were further subdivided as A-1, A-2, A-3, etc. Each index card was then inspected as the residential structure assigned an alphabetical rating following guidelines of the assessor's office. Field checks were made to determine the accuracy of the assessor's evaluation. It proved to be generally consistent with the major re-evaluations being for well-maintained, older houses which in our opinion were of a higher standard than a pure economic evaluation would indicate. Following preliminary tabulations of housing on the alphabetically identified scale, the number of groupings was consolidated for clarity under the headings of "Standard", "Substandard" and "Dilapidated". The assignment of descriptive terminology was based both on census methodology and on an internal determination of acceptable housing conditions within Garfield County. Such an arbitrary determination as this latter step could be erroneous had we not previously determined that the county housing inventory overall represented the highest state of condition within the Region. In addition to condition, the assessed valuation, age, location and type of dwelling were included as well as the material of construction. The information was recorded on data processing cards, tabulated electronically and collated in a bound booklet of print out sheets. A total of 4063 residential structures, exclusive of mobile homes, was evaluated in this manner.

COUNTY-WIDE HOUSING EVALUATION

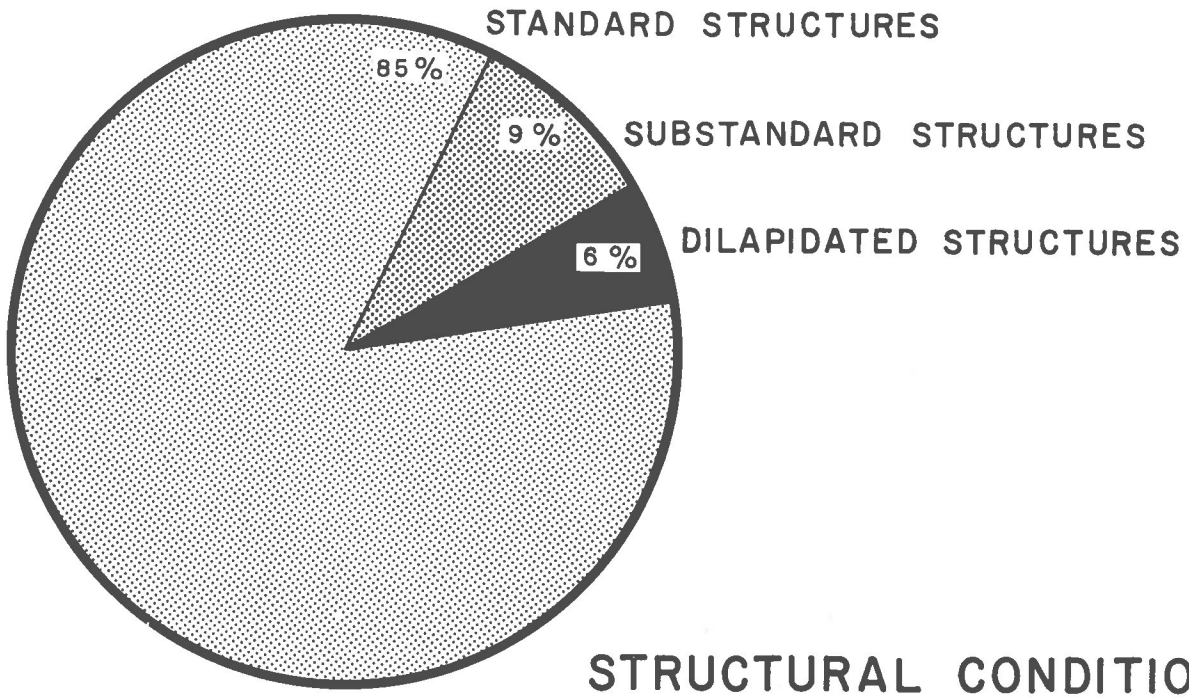
Housing Age and Condition

The accompanying chart portrays the age of all surveyed residential structures (4063) in the County. The upper graph gives the age by construction date for existing structures, nearly half of which have been built since 1940. Fourteen percent of the total were built prior to 1900. The lower bar chart indicates the proportion of structures in each conditional category on an age basis. The percentiles of dilapidated housing decreased concurrently with age as did the proportion of substandard housing.

HOUSING TYPE AND CONDITION - 1969 GARFIELD COUNTY



4063 RESIDENTIAL STRUCTURES EVALUATED



Housing Type and Condition

Of the 4063 residential structures evaluated, nearly all were of the single-family type. Only 5% of county housing was of a two-family or multiple-family character. Duplexes are not a popular housing configuration in this area where the ideal family housing is conceptualized as one house on one lot. This may change as the resort complexion of the area grows more apparent. In Pitkin County, many new dwellings in and near Aspen are either duplexes or have a sufficient accessory living unit for guests and are technically classified as a two-family dwelling. The low proportion of multiple family units may increase as land and construction costs combine to price "one house on one lot" beyond the economic capability of a large proportion of the population.

Approximately 1300 mobile homes existed in the county as of 1968, based on sales of licenses. The mobile homes used for permanent dwelling purposes would be technically classified as single-family dwellings. Expansion of the mobile homes inventory reflects the above-mentioned factors of land and construction cost and the concept of a detached dwelling, even though it may be located in a mobile home park.

County-wide, there were 85% standard structures, 9% substandard, and 6% dilapidated. The variance between the 9% of structures classified substandard in this analysis vs. the 18% classified deteriorating during the 1960 census reflects the increased amount of maintenance funds expended on deteriorating dwellings as the economic base of the county expands. The increased cost of new housing also encourages remodeling of older structures. There was also a change in cultural awareness which began to emphasize the value of architecturally interesting old residences. The addition of over 600 new residences classed as standard also reduced the proportional magnitude of the substandard group. The proportion of dilapidated structures increased between 1960 and 1968 as did the actual number of such dwellings due to continued deterioration in rural areas of the county.

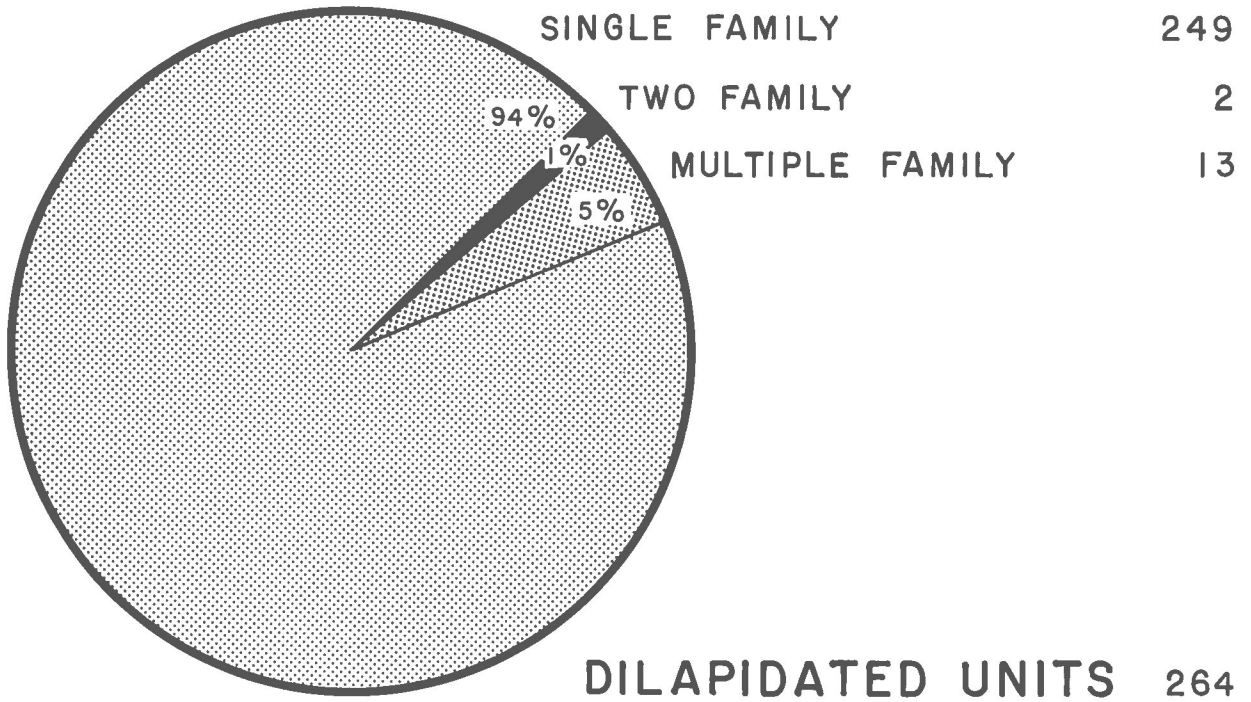
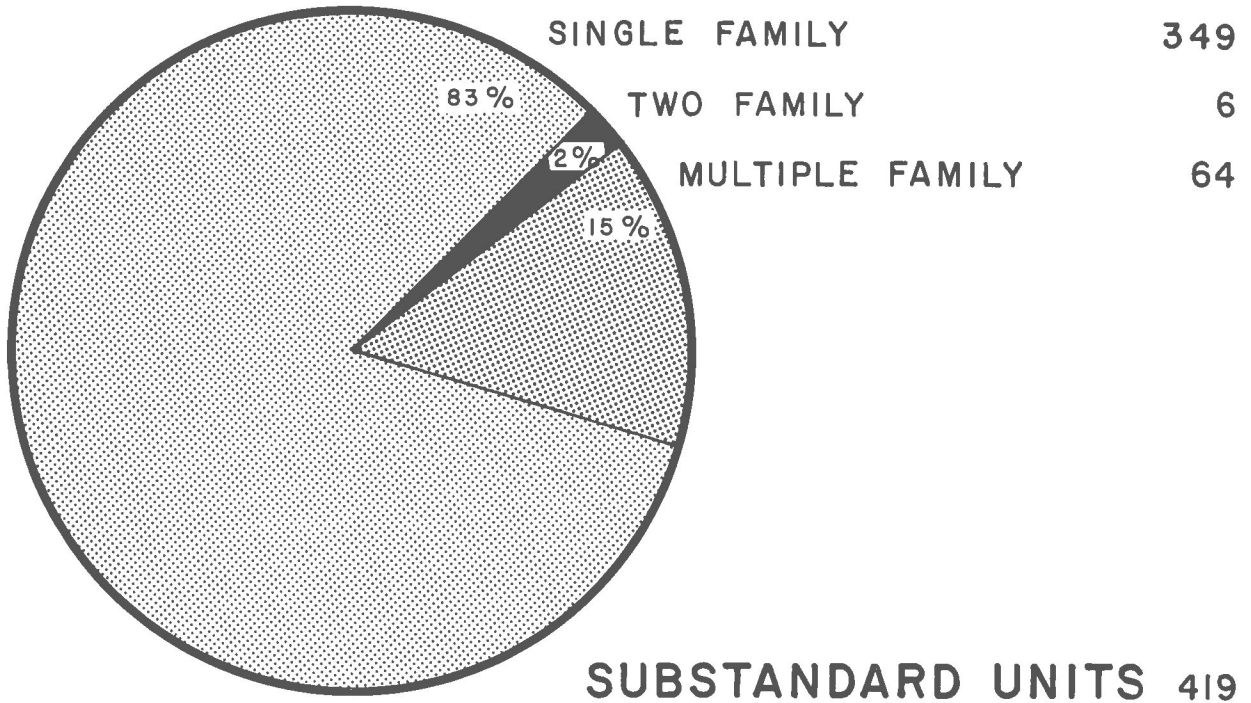
Substandard and Dilapidated Housing Units

The accompanying chart "Substandard and Dilapidated Units - 1969" portrays the close relationship between the total number of each structural type in the county and the rate of decay for each type. There is no outstanding problem of excessive deteriorated or dilapidated condition for a particular type of dwelling.

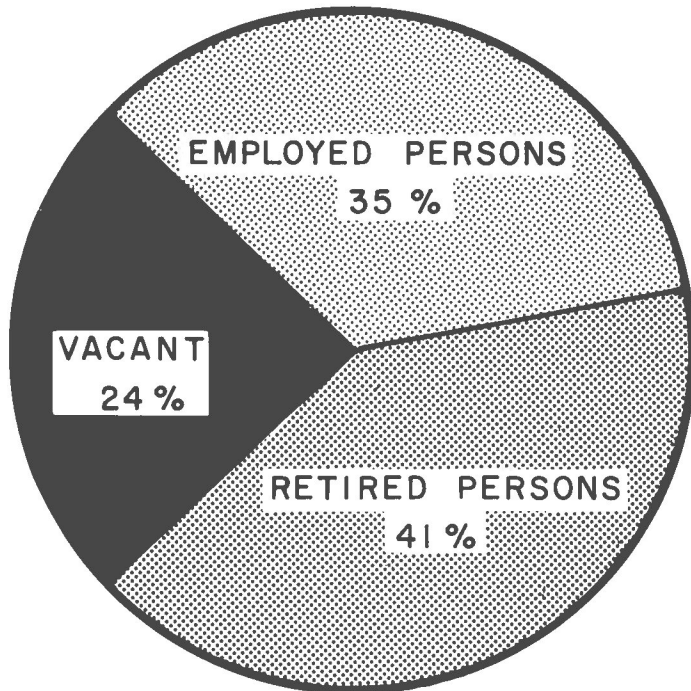
Dilapidated Housing in Incorporated Areas

Knowledge of who occupies dilapidated housing is vital to formation of a housing program to remedy an unacceptable situation. Housing classified as dilapidated is considered unfit for human habitation. Information was collected on the age and employment status of persons living in such housing within incorporated areas of the county.

SUBSTANDARD & DILAPIDATED UNITS - 1969 GARFIELD COUNTY



DILAPIDATED HOUSING IN INCORPORATED AREAS OF GARFIELD COUNTY



STATUS OF OCCUPANCY

KEY

VACANT



EMPLOYED



RETIRED



CARBONDALE

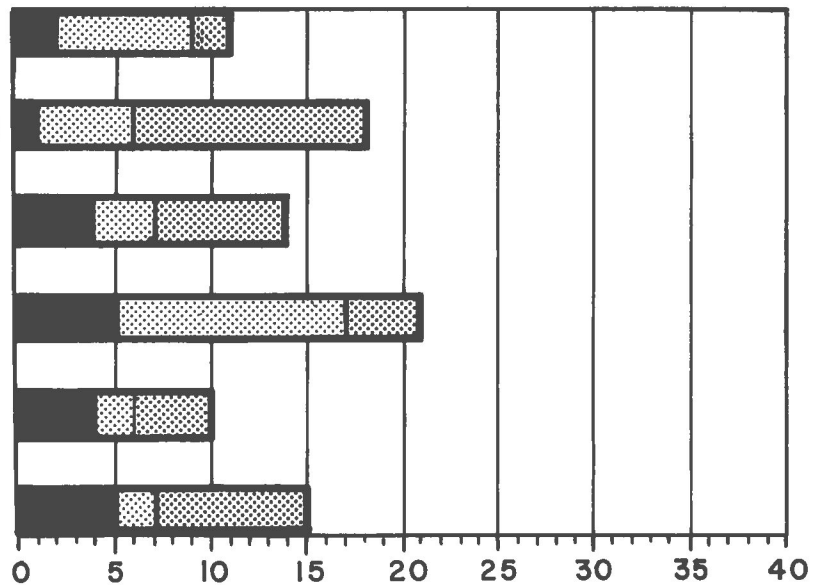
GLENWOOD SPRINGS

GRAND VALLEY

NEW CASTLE

RIFLE

SILT



DWELLING UNITS

Investigation showed that nearly a quarter of the urban dilapidated housing checked was vacant. A much larger proportion was occupied by employed persons and their families contrary to popular local belief that retired people comprise the bulk of such occupants. This relationship varied by area, with Carbondale and New Castle having a far greater number of employed persons than retired people in poor housing. While economics are partially responsible for this willingness to accept poor housing, an additional factor is the lack of acceptable rental housing at any price, combined with a high level of transient families employed in construction. There was no disparate relationship between minority status and occupancy of dilapidated housing.

Most of the dilapidated housing in rural areas is either vacant or only seasonally occupied by recreationalists with little interest or incentive in improving it, particularly in regard to indoor plumbing, which is usually unavailable.

HOUSING CONDITIONS BY STUDY AREA

Garfield County was divided into three study areas coinciding with school district boundaries. The accompanying graph delineates the geographic location of each and includes a tabulation of condition by dwelling type for each study area and its included communities.

RE-1 and 50

The eastern portion of the County, including Glenwood Springs and Carbondale, had 89% standard, 6% substandard and 5% dilapidated residential structures, which was slightly above the county average. Of the 90 dilapidated structures, 59 or 63% were located in rural areas. The unincorporated area of West Glenwood had no dilapidation and only 3% substandard. Total structures evaluated was 1986. Of the 511 residential units built in the study area between 1960-68, 83% were single-family, 2% duplexes and 15% multiple-family. The slight edge in apartment construction in this study area over the county performance probably has some basis in the higher land cost in the eastern portion of the county, which encourages multiple-family construction.

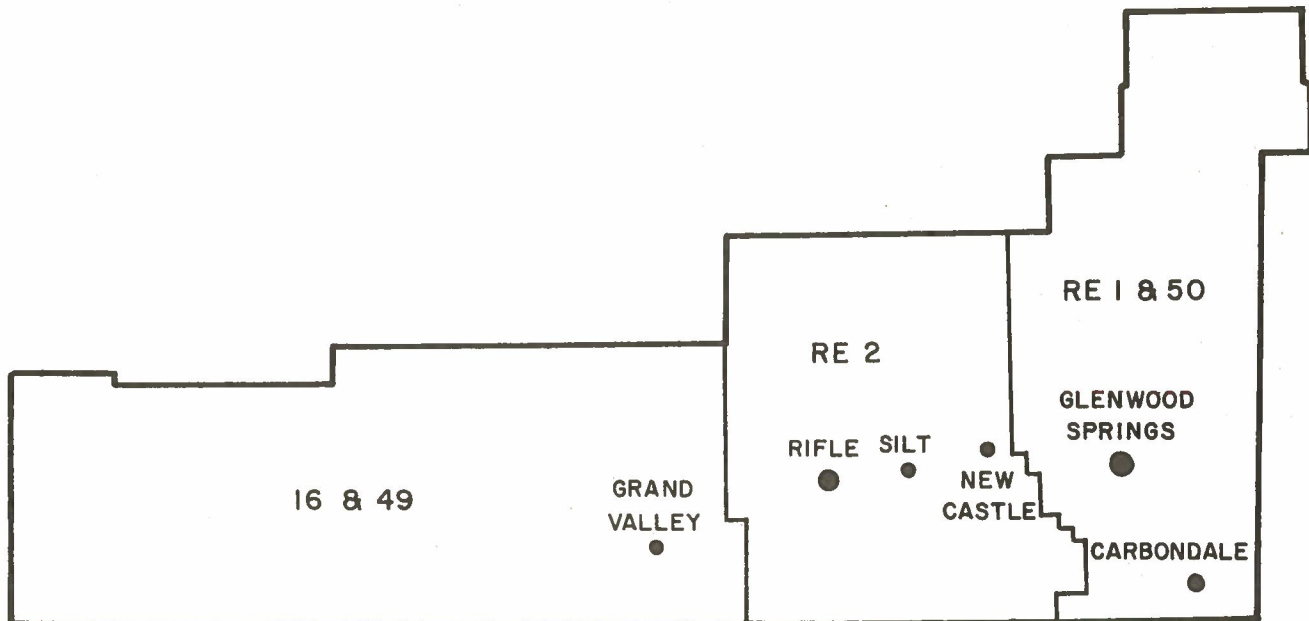
RE-2

The central portion of the county, including New Castle, Rifle and Silt, had 82% standard, 11% substandard and 7% dilapidated residential structures, which was slightly below the county average. Of the dilapidated structures, 60, or 55% were located in rural areas. Total structures evaluated was 1720. Of the 183 residential units built in the study area between 1960-68, 93% were single-family, 3% duplexes, and 4% multiple-family.

16 and 49

The western portion of the county, including Grand Valley, had 73% standard, 13% substandard, and 15% dilapidated residential structures, which was well below the county average. Of the dilapidated structures, 38, or 73%, were located in rural areas. Total structures evaluated was 357. There were nine dwelling units built in the study area between 1960-68.

HOUSING STUDY AREAS - GARFIELD COUNTY



HOUSING CONDITIONS BY STUDY AREA - 1969

CONDITION:	STANDARD				SUBSTANDARD				DILAPIDATED			
	S/F	T/F	M/F	TOTAL	S/F	T/F	M/F	TOTAL	S/F	T/F	M/F	TOTAL
CARBONDALE	124	2	11	137	24	0	4	28	13	0	0	13
GLENWOOD SPRINGS	862	32	48	942	45	2	2	49	19	0	1	20
WEST GLENWOOD	148	0	2	150	2	0	0	2	0	0	0	0
RURAL RE 1 & 50	525	4	17	546	42	0	0	42	57	0	0	57
NEW CASTLE	109	0	6	115	45	0	0	45	24	0	1	25
SILT	92	0	2	94	20	0	0	20	15	0	0	15
RIFLE	581	19	21	621	34	1	3	38	10	0	0	10
RURAL RE 2	582	3	0	585	92	0	0	92	60	0	0	60
GRAND VALLEY	76	1	2	79	13	0	0	13	13	1	0	14
RURAL 16 & 49	180	0	1	181	32	0	0	32	38	0	0	38
TOTAL	3279	61	110	3450	349	3	9	361	249	1	2	252

MOBILE HOMES

In 1969, there were approximately 1300 mobile homes located in Garfield County, about 500 sited within incorporated areas in mobile home parks, and the remainder located outside of courts in incorporated and rural areas and in rural mobile home parks. Allowing for the fact that 20% of the licensed mobile homes were actually used for travel purposes rather than as permanent dwellings, based on an average of three persons per mobile home, slightly over one-fifth (21%) of Garfield County's population was living in mobile homes as of 1969. Only 7% of the population was similarly housed in 1960. There are several contributing factors underlying this increased popularity of mobile home living, including the desire for moveable quarters by transient families, the ease of maintenance for retired persons, the lack of speculative home building and rentals in the county, and the pre-furnished convenience of a mobile home. Cost relationships between mobile homes and new single-family dwellings will be further discussed under the "Economics of Single-Family Housing" later in this report.

As of 1969, five hundred of the 1300 mobile homes in the county were located in mobile home parks. Thirty-three mobile home parks containing 200 mobile homes were surveyed in incorporated areas as follows:

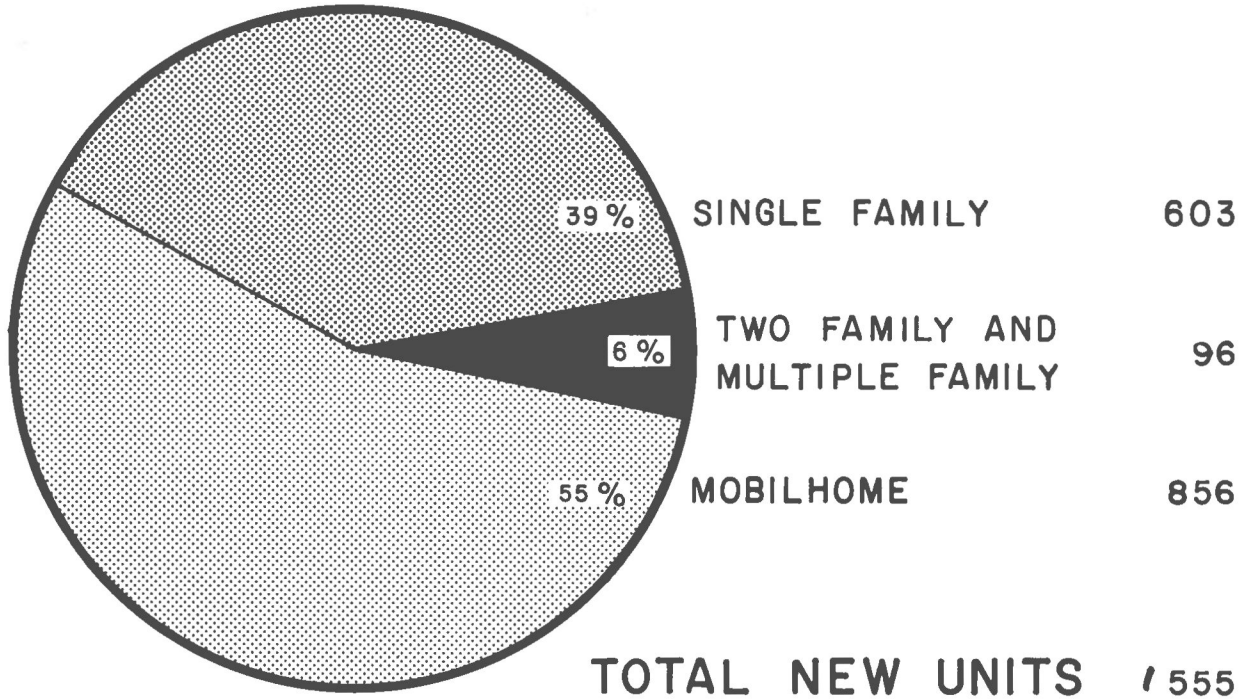
Carbondale 4	Silt - 1
Glenwood Springs - 13	Rifle - 11
New Castle - 2	Grand Valley - 2

Evaluated purely on the basis of physical dimensions, three classifications of mobile home parks were established:

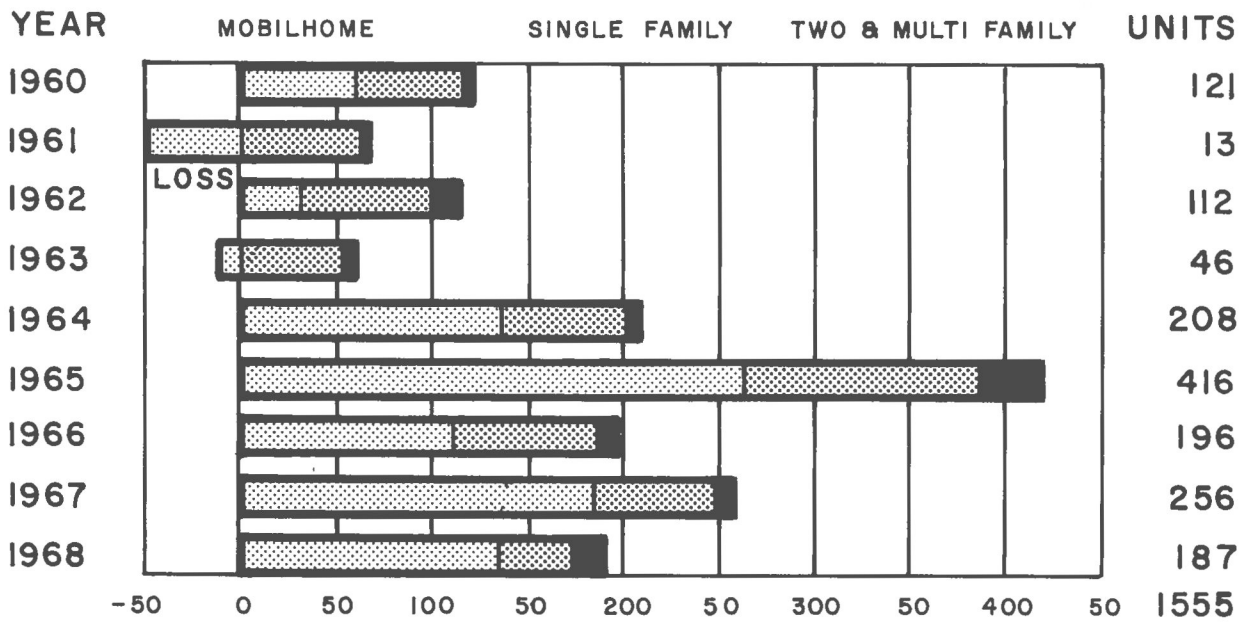
<u>Classification</u>	<u>Individual Spaces in Sq. Ft.</u>	<u>Parks</u>	<u>Mobile Homes</u>
Superior	3100 sq.ft. and over	7	90
Standard	2100-3000 sq.ft.	15	50
Minimal	2000 sq.ft. and under	11	60

Mobile homes are becoming an increasingly important component of the county housing inventory. The standard of housing provided in this manner is generally sound. The siting of mobile homes on the land is a more obvious problem, one which can be alleviated by regulation of mobile home park design.

RESIDENTIAL EXPANSION — 1960-68 GARFIELD COUNTY



CONSTRUCTION BY YEAR



HOUSING PROJECTION - 1970-90 - GARFIELD COUNTY

Population Projection

According to the 1960 census, Garfield County had 12,017 inhabitants. In 1960, it was estimated that the county population would grow to 14,625 by 1970 and 18,250 by 1985. County population was counted at 14,568 by the 1970 census, or 56 persons under the estimate; an error of less than .4 of one per cent. Slightly over 2500 persons were added to the county population over the period 1960-70. Application of the previous 10-years' experience to the future 20-year period indicates a growth potential of 5000 persons. Thus, in 1980, the county can expect a population of 17,000 and by 1990, a population of 19,500 persons. The projection assumes steady economic growth with a constant addition of immigrating people.

Growth over the period 1960-70 was concentrated in the Glenwood Springs County Census Division, which gained 2693 people. The New Castle-Silt C.C.D. gained by 66; the Rifle C.C.D. lost 77 and Grand Valley C.C.D. lost 70. The Glenwood area's gain was based primarily on expansion of coal mining and associated activities, the increase in recreation-oriented activities, both in Garfield and Pitkin Counties, and the expanding role of Glenwood Springs as a retail and service center. Future growth may be more evenly distributed with the initiation of an oil-shale industry on a modest scale in the western end of the county and increased benefits from tourism as Interstate Highway 70 is completed, thus attracting more potential recreation dollars to the areas providing services along this route.

Housing Requirements Based On Population Growth

The average household size declined in Garfield County from 3.06 in 1960 to 2.66 in 1970. Within the Glenwood C.C.D., however, the 1970 household averaged 2.90 persons, a figure assumed as more characteristic of housing constructed as a result of population growth. Based on the population projection above, this would result in a need for 1724 additional housing units over the period 1970-90, or 862 per 10-year period.

Housing Requirements Based on Replacement and Remodeling of Existing Structures

The chart on Residential Expansion - 1960-68 - Garfield County, indicates that 1555 new dwelling units, including mobile homes, were added during that period. Projection of that rate to 1970 would indicate a growth of 1700 new residential units. Since absolute population growth would only account for about 930 of these new housing units; the remaining 770 represent replacement of abandoned or demolished housing and extensive remodeling of an existing structure which was counted as a new residential structure. Based on the presence of 683 substandard and dilapidated residential units in the county as of 1969, there is an apparent need for the present rate of replacement and remodeling to continue.

Total Housing Requirements - 1970-90

Housing Required to Accommodate Population Growth = 1724 units
Housing to Replace Substandard and Dilapidated Units = 1400 units
Total Additional Housing in Garfield County = 3124 units

HOUSING DETERMINANTS

Housing Constructed in Garfield County 1950-68

<u>Period</u>	<u>Single-Fam.</u>	<u>Two-Fam.</u>	<u>Multi-Fam.</u>	<u>Mobile Home</u>	<u>Total</u>
1950-59	694 - 68%	34 - 3%	96 - 9%	200* - 20%	1024 - 100%
1960-68	603 - 39%	14 - 1%	82 - 5%	856 - 55%	1555 - 100%

*estimated

Recent Single Family Dwelling Construction

Analysis of 233 single-family dwellings built in the unincorporated portions of the Glenwood Springs C.C.D. - a leading county growth area - indicates that the average size of such dwellings was 1230 square feet. There was no apparent trend in dwelling size by year; the average area was 1245 sq.ft. in 1960, reached a high of 1440 sq.ft. in 1963, a low of 1140 in 1965, and ended at 1430 in 1968. One correlation did appear, that between number of dwellings built in a particular year and average size of dwellings for that year; the more dwellings constructed, the smaller the average size.

Average current market value of the single-family dwellings analyzed is \$24,000 or a gross value of \$18.75 per square foot of building, including land, improvements and construction.

Economics of Single-Family Housing

A \$24,000 single-family dwelling with a 20% down payment, a 20-year, 9.5% mortgage, taxes and insurance, required monthly payments of \$221.00. A 12' x 60' mobile home retailing for \$7500, with a 15% down payment and a 7-year, 13.69% loan, park rental, taxes and insurance, requires a \$175.00 monthly payment, which decreases annually after the first year, due to the relationship between depreciation and taxes.

The average family income in Garfield County for 1969 was estimated at \$8400. Lending institutions assume that generally a family of average income should not expend over 22% of their gross income for housing. This figure is \$154.00 monthly for the average Garfield County family. Thus, in recent years, only those families with an income well above average have been buying or building new single-family dwellings. Many others who are in the average or below-average income groups and are seeking new housing are electing or actually required by circumstance to live in mobile homes.

Federally Assisted Housing

Currently, three housing projects with assistance from the Federal Housing Administration are under construction or completed in Garfield County. The form of assistance varies by project and includes regular F.H.A.-guaranteed loans on dwellings with a three-percent down payment on the first \$15,000 of the purchase price and 10% on the cost over \$15,000. A low-income program is also being utilized - Title 235 of the National Housing Act for single-family dwellings and Title 236 for multiple-family dwellings - where the F.H.A. guarantees the construction loan and subsidizes all but one percent of the interest, providing the housing is rented to families whose size in relation to income are in such imbalance that they have little possibility of securing adequate housing on the open market. Ten single-family dwellings have been built, three in Glenwood Springs and 7 in Carbondale; a 12-unit row house project has been built in Rifle and a 42-unit apartment complex is under construction in Glenwood Springs. The 64 housing units financed through the F.H.A. in Garfield County in 1970 are equal to 73.5% of an average year's residential construction in the county, based on the previous 10-years' building activity.

Public acceptance of these projects has varied. The detached single-family dwellings seem to be the least objectionable although there are comments on the size of the dwellings as being small at 1000 square feet of floor area each. The Rifle project generated heated objections from adjacent property owners on the size and type of units and the small lots. The Glenwood Springs multiple-family project is the subject of a lawsuit to gain an injunction against construction. The plaintiffs allege errors in the issuance of the building permit and interpretation of zoning regulations.

Components of New Housing Cost

There are four general areas of cost in construction of housing - land, improvements including utilities, dwelling construction, and financing. The four components are evaluated below to determine their effect on the character of future housing in Garfield County.

The cost of raw land, particularly in the Roaring Fork Valley, is in a speculative boom based on two factors: that "they are making more people but not more land" in this very desirable area, and that the tremendous profits being made on land in and around the Aspen resort complex has a relative impact on land located well beyond the actual scene of resort construction. This latter circumstance is unfortunate, as the people who work in the resort complex find it difficult to secure adequate housing there and are frequently forced to commute from other areas of the Roaring Fork Valley, only to find that they cannot escape the resort influence on land costs. Any decline in the resort construction activity would probably be reflected in a decline in land cost, but the housing problem would be redered academic due to the decline in employment and housing needs. Assuming that undeveloped land costs will probably not decline, to provide adequate new housing for people in the lower income groups, new concepts in residential design

must be utilized to reduce the importance of land cost in relation to the total cost of new housing. Planned development subdivisions, clustering of residences, row house plans and greater use of duplex and multiple-family structures would each contribute to economy in the use of the land.

Improvements include those facilities which are necessary for urban and suburban housekeeping. Drainage ways and structures, sewer and water facilities, energy and communications lines, and street improvements are all necessary to transform raw or undeveloped land into a suitable environment of human habitation. The expense of materials and installation of such improvements is high and will probably increase in the future. Moreover, as the absolute number of people in a given vicinity increases and the character evolves from rural to suburban, the concern over environmental quality precludes any significant reduction in the level of improvements in developing neighborhoods. For example, scattered ranches in the Four Mile Creek area presented very few environmental problems. Two large-lot subdivisions in the same area increased traffic and began to saturate the eco-system with wells and septic tanks. Were the entire area of Four Mile to be similarly developed, the road would prove inadequate, the creek would take on a suspicious color and odor, and the affect on the water table's level and content would be measurable. Enforceable subdivision and sanitation regulations and zoning control are necessary to insure that newly developing areas avoid these problems. The use of cluster subdivision plans is one partial answer to the high cost of improvements necessary for new developments. Another approach to improvement cost is to utilize vacant lots and tracts within areas presently served by utilities and streets, thereby reducing the capital outlay for improvements and strengthening the financial base of the entity providing the required improvements.

Construction cost of dwellings will also increase as the cost of materials and labor rises. Custom construction of dwellings will gradually diminish in direct proportion to such cost increases until only high-income families and those who can do all or a portion of their own building will be able to afford such housing. The emergence of a stable industry producing pre-fabricated dwellings or the pre-fabricated modular components of dwellings will ultimately lead to its domination of the low and middle income housing market. This trend is already established as noted in the popularity of mobile homes at the present time.

Financing of a dwelling includes three related factors - the availability of mortgage loan money, the return on such money to the investor, and the impact of the interest charge on the purchaser or renter of a dwelling. Mortgage money is available in Garfield County, but the rate of interest, 9%, is sufficiently high as to add significantly to the monthly payments on a single-family dwelling to the point where only those with an income well above average or with an available equity already established in a previous residential investment can afford a new single-family dwelling. In addition, high interest rates, as affected by the rate of return possible from other investments such as stocks and bonds, have largely precluded the construction of single- and multiple-family rental units. The rent schedule on such units necessary to provide a competitive return is too high for local market acceptance. While it is anticipated that interest rates on mortgages will decline somewhat,

it is doubtful that they will reach a level sufficiently low to mitigate the other cost factors pinching the residential market. The attempt by the Federal Government to reduce or subsidize interest payments are understandable in light of the above. It is the most readily available component of residential construction cost to subsidize. The cost of financing a dwelling is reflected in two costs to the purchaser; the required down payment and the required monthly payment on the outstanding balance. The latter is a function of the time of repayment plus the money required to cover the reduction of principal, interest charges, taxes and insurance. The average \$24,000 single-family dwelling discussed previously actually requires an investment of nearly \$53,000 over the period of a 20% down, 20-year, 9.5% loan. Reduction in the required down payment or extension of the time of repayment would substantially increase the total investment in such a dwelling.

Consideration of the preceding factors affecting the housing market leads to the conclusion that if the present trend in the cost of new dwellings is not altered, the construction of single-family dwellings as experienced over the preceding 20-year period in Garfield County will continue to decline in relation to provision of housing for the average income family. The requirements of an expanding population will be met by a continuing growth in the number of mobile homes or similarly pre-manufactured dwellings. The overall effect will be to substantially extend the utilization period of much of the county's substandard and dilapidated housing, some of which can be improved and some of which cannot economically be rehabilitated. Options for changing the present trend are available but their implementation is dependent upon rethinking of the housing market by all who are in the position of supplying that market, including landowners, local government, builders and financiers. Overshadowing all such local options, is the emergence of direct Federal subsidization of housing in the county. Lacking any other modification of present trends, the amount of such subsidization as is available will probably be used and the scope of availability in terms of the population qualifying for such aid will probably increase.

Character of Projected Housing

In the absence of any relative change in current economic balance of the housing market, the proportion of custom-built, single-family dwellings in relation to total housing construction will continue to decline. Duplex construction could account for an increased share of the market, although there is little more than economic need to justify such an assumption. Multiple-family construction should proportionately increase to serve that segment of the market comprised of families who are relatively mobile, prefer conventionally constructed dwellings to mobile homes, and are willing to accept a reduction in privacy and a relatively high rental rate to avoid a large down payment and high-interest mortgage loan. A large portion of the new housing market will necessarily be satisfied by the mobile home manufacturers. Pre-manufactured modular housing has the potential of competing with the mobile home, provided design can be improved and the relatively high cost of site improvements for a modular dwelling can be reduced.

RECOMMENDATIONS

1. Based on the proportionately large amount of older housing in the County, a more detailed study of occupancy of substandard and dilapidated housing should be made to determine its internal condition and status of occupancy; whether it is occupied by owners or renters. The restrictive economics of the new housing market will encourage continued occupancy of most of these dwellings. If further study reinforces the initial findings of this survey, that a substantial portion of dilapidated housing is occupied by working age families, and also concludes that they rent rather than own the residence, the county should adopt a housing code applicable to rental housing. Such a code would assure decent housing for those who must secure it in the rental market.

2. Certain steps can be taken by local persons involved in the housing market to counteract the trend of continuously rising cost of land development and construction.

The listed sale price on strategically located parcels of undeveloped land should be re-evaluated by owners in view of its actual value, if it is not absorbed into the real estate market.

New residential developments should be planned to make optimum use of the land. Design of subdivisions incorporating clustered dwellings, row houses and multiple-family units would result in savings on the per-dwelling cost of land and improvements. Subdivision regulations should be flexible enough to permit such design options while continuing sufficient improvement requirements to preclude the creation of new environmental problems.

Zoning regulations should recognize the need for and encourage proper development of subdivisions and parks for mobile homes as this type of housing will probably continue to serve a significant portion of our population.

Design and appearance of pre-manufactured housing should be improved to where it can gain public acceptance in established as well as developing neighborhoods.

3. As an alternative to direct Federal subsidy devoted to housing specific segments of the population such as low-income families or the elderly, a broad Federal program should be implemented to encourage private investment in the entire housing market. The program should be in the form of an indirect subsidy through income tax or similar incentives to private investors. Such a program should be designed to influence the terms and conditions of mortgage loans made thereunder to render them attractive and available to a large proportion of the population. Loans should be made only on permanently occupied dwellings and the program should concern itself more with the financing of housing than with its location or design. These latter considerations should be the responsibility of the individual investor reacting to local market conditions.

