SOCIAL IMPACT OF THE TRANS-
ALASKA PIPELINE CONSTRUCTION
IN VALDEZ, ALASKA 1974-1975

Testimony prepared for the Mackenzie Valley Pipeline Inquiry

by

Dr. Michael Baring-Gould
Marsha Bennett
Department of Sociology
University of Alaska Anchorage

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Section I: Introduction

On April 29, 1974 construction on the trans-Alaska pipeline from Prudhoe Bay to Valdez began, initiating a project which would cost well over $7 billion and employ at peak construction periods close to 20,000 workers—the largest project by private enterprise in the world. Valdez, Alaska, site of the terminus for this pipeline had waited many years for this opportunity and eagerly anticipated the benefits.

Valdez is a small, picturesque "Switzerland of Alaska" community located at one end of a Prince William Sound fjord in the northern Gulf of Alaska. It is at the end of the Richardson Highway, 100 road miles south of Glennallen and the Alaska Highway. This road winds over the 2700 foot Thompson Pass 35 miles north of Valdez before dropping off sharply into Keystone Canyon, where vertical cliffs and waterfalls fight for space with the remnants of a mule trail carved into rock on the edge of the river. In anticipation of development, the Valdez City limits had been expanded 22 miles up the road, an area inhabited in 1973 by occasional roadside cabins, several farms and isolated homesites "out the road".

Amidst trees of spruce and cottonwood, Rainbow Trailer Court, 6 miles out, was the first major sign of development, a gas station which provided a focus for fifteen-odd trailers. A few miles further on the Richardson Highway, a new road now leaves the highway for the terminal site. Four miles from Valdez is the Acres Bar and crossroads; toward the mountains is the airport, city campground and Valdez Glacier, and currently the Kennedy and Keystone work camps and further trailer court developments; toward the bay are the yards where the pipe lay stacked when construction was stopped by injunctions, the abandoned
site of Old Valdez and Loop Road which surrounds Zook Subdivision—a sub-community of older trailers and homes, yards filled with boats and nets, or trucks or welding equipment, dependent upon the profession of the owner. It was these families which resisted relocation to the new planned community site following the 1964 earthquake. The new townsite is two miles across the flats where the arctic terns nest: a neat rectangular town lying perpendicular to the steep mountains and shores of the bay. On the bay are the docks, ferry terminal and warehouses; only minimal shoreline has been saved for a single hotel and the small boat harbor. Another temporary trailer court fronts this harbor, interspersed with a cafe, bar, laundromat and the harbor master's office. The major portion of town is across the highway towards the mountains: the first two blocks constitute the business district: in 1973 two grocery stores, a two-story bank with living quarters on the second floor, a clothing store and various offices, several hotels, a cafe and restaurant, a chalet-type post office close to City Hall. The remainder of the town was residential: two streets on the long sides of the rectangle directed toward the mountains, rows of cul-de-sacs from each of these butting in the central park, an undeveloped piece of land whose sole improvements were the elementary school, an infrequently used tennis court and paved walkway. With the exception of low income housing and a single apartment complex, all housing was single family: neatly constructed and new ranch-style subdivision houses interspersed occasionally with older and taller wooden frame buildings moved over from Old Town, and empty lots on which weeds grew. Relatively few homes had lawns or landscaping: these constitute the final touches of relocation upon which Valdez was just starting. Near the top of the town are the major employers: Harborview Hospital (for the physically and mentally retarded), the warehouses and offices of the Highway Department complex, and the high school. A dirt road leads past the high school
and abandoned Army recreation camp to a water tower overlooking the city, and the valley and abandoned mines up Mineral Creek. Two years later this rectangle would become a square with new Flour and Alyeska staff housing built on the Mineral Creek side of town.

The people of Valdez are proud of their history as well as their environment, and some saw the pipeline as a chance to return to the community's earlier eminence during the gold rush. At that time (1898-99), Valdez was a port of entry to 3,000-4,000 miners who travelled by foot and dog sled over the Valdez Glacier in search of gold in the interior. In 1899, the Army had established Fort Liscum as the base of a new road link between Valdez and the interior and the future prosperity of the town seemed assured: several railroad projects were initiated in anticipation of major copper deposits in the Chitina-McCarthy area along the Copper River. But a promoter's scheme to build a "home rule" railroad in competition with the Guggenheim-Morgan interests eventually failed when the rail transport of copper went instead to Guggenheim-Morgan affiliates and the city of Cordova.¹

The failure of the railroad was followed by similarly futile attempts to establish the city as a center for the University of Alaska, the Third Judicial District Headquarters and a center for mining activity. Economic decline and marginality continued when the Army withdrew from Ft. Liscum in 1922, received a short-term respite when Valdez became the regional headquarters of a newly formed Alaska Road Commission in 1923, and then lost the advantages of its status as an ice-free port and transportation center when federal tolls were placed on the highway and freight traffic diverted to the federally funded rail-

road north from Seward.\textsuperscript{2} Later sawmill operations, a fluctuating but declining fishing and cannery business, tourism and continued Road Commission employment sustained a relatively small population of around 500 from the 1920's to the late 1960's, when news that Valdez had been selected as the pipeline terminus again began to attract new immigrants.\textsuperscript{3}

In addition to its natural setting and a history determined by external events, one other historical development has strongly influenced the adaptation of Valdez to pipeline construction and development—the devastation of the town by the Good Friday earthquake of 1964. When John Kelsey and George Gilson actively promoted Valdez as the terminal site for the trans-Alaska pipeline in the late 1960's, the community had just begun to recover from that earthquake, its tidal wave and the deaths of 32 residents. The U.S. Government had helped the community relocate to a new townsite, and with the guidance of the Corps of Engineers, a new planned community had been constructed with urban renewal funds. Former Governor Egan, a native Valdezean, had helped secure the regional headquarters of the State Highway Department, and the State Harborview Memorial Hospital for mentally retarded children had also been located in Valdez. In spite of this, economic instability continued: the fishing industry had been in steady decline. Trucking, construction work and tourism, which supported many in the summer months, left most of these workers with little or no employment in winter. In 1969, a Department of Labor study indicated that forty percent of the Valdez labor force was unemployed.\textsuperscript{4}

\textsuperscript{2}Conversations with Dr. Steven Haycox, Alaska historian, June 24, 1976.

\textsuperscript{3}Ibid. See also Ernest Gruening, Many Battles.

\textsuperscript{4}Alaska Manpower Resources: East Central Alaska, a report of the results of a comprehensive manpower study and skill survey conducted September-November 1969 for U.S. Department of Labor, p. 22.
During these post-earthquake years, Valdez residents were preoccupied with rebuilding their homes in the new townsite four miles from Old Town, and since the town was small and had few stores or professional services, frequent trips were made to Anchorage to obtain these services. The social organizations and friendly social activity of Old Town were missed by those who committed themselves to staying after the earthquake, and many felt disrupted and uprooted by their forced move. The governing of the city fell to the relatively secure Highway Department employees and businessmen, among them George Gilson and John Kelsy, promoters of the pipeline terminus.\(^5\)

When we first visited Valdez in November 1973, we were struck both by its beautiful natural setting and by a seemingly predominate white collar labor force. It was only later, during winter residency in the community, that we noted the high seasonal unemployment of a significant fraction of that labor force. Combined with the outmigration of youth and lack of other opportunities for growth, the rationale for eagerly anticipating the trans-Alaska pipeline is evident.

On the other hand, when we asked respondents to our first survey in 1974 whether they anticipated working on the pipeline, only 22% stated they had such plans. Another 5% were not sure. The same percentage of respondents stated that they would like to change jobs in response to another question on job satisfaction. In contrast, 62% stated they would not want to change jobs. However, an overwhelming percentage expected Valdez's economy to boom and an increased number of services, stores, and amenities to be available locally. They expected a number of social problems long associated with boom-type growth to also visit Valdez, but surprisingly, these problems were seen, especially by the old-time Valdez residents, as minor disturbances in the long-term commitment to a more economically viable community. Our respondents in 1974 overwhelmingly

\(^5\) From interviews with former residents and old-time residents of Valdez.
welcomed Alyeska staff families (82%) and were almost as much in favor of construction workers and their families living in town (67%), but they also somewhat naively expected Alyeska to provide badly needed recreational facilities and other amenities the community had long been unable to afford. There was a feeling in many of our interviews of eager anticipation of the benefits of pipeline activity and monetary support for long-postponed community projects. The predominant philosophy appears to have been one of anticipating rewards that the pipeline would bring but without consideration of practical commitments that the community would have to make in terms of providing and paying for expanded services, integrating new population elements, or changing in any fundamental respect the traditional life of Valdez.

Section II: Methodology and Sources of Data

This report presents the results that we have obtained from our research on Valdez over the past two and a half years. The Project was initiated in November 1973 and has continued since that time, in part funded by the State of Alaska's Coastal Zone Management Program and in part by funds from the National Institute of Mental Health.

Information for the research has been obtained through a variety of sources. Formal survey interviews were conducted in both 1974 and 1975 with random samples of household heads that were enumerated from local censuses. These censuses, taken in January 1974 and July 1975, provide another source of data. In addition informal participant observation and interviews with key informants have been held on a continuous basis throughout the duration of the project. In order to perform this on a continuous basis, one of the researchers resided in Valdez for one year during the first year of pipeline impact. In addition to her work in City Hall and participation in various social organizations in Valdez, this has provided a means for close familiarity with the community and many of its mem-
bers. A fourth source of data has been the collection of available statistics and secondary data from many of the public service agencies and organizations existent in Valdez. Finally maximum efforts have been made to promote public involvement of the Valdez community in the research process. By making research reports available to Valdez respondents and by holding a community workshop on the results of the research, feedback from the community has been obtained.

The surveys in Valdez were conducted in April 1974 and September 1975. Of the 350 Valdez families listed in the January 1974 census, 150 were randomly selected from the census lists and 136 of these were interviewed by University student interviewers. In all cases the interviews were conducted with either the male or female head of household. In addition, a shorter interview was conducted with a head of household in 150 of the remaining families in order to obtain basic information on family composition and employment.

In 1975 interviews were repeated with as many members of the original 136-member sample as could be located in Valdez. One hundred one interviews from this panel were completed. Of the remaining 35 members, 22 had permanently left Valdez during the intervening year, and others either declined to be interviewed or could not be contacted. In addition, a second sample was selected and 123 interviews conducted with families which had moved into Valdez between December 1973 and July 1975. These families were randomly selected from a census taken for the city by the Valdez Project in July 1975. Finally, a random sample of workers in each of the three pipeline construction camps located in Valdez was selected which included ten workers interviewed at Kennedy Camp, 21 at Keystone and 30 workers interviewed at the Terminal Camp. These 1975 interviews were conducted by paid student interviewers.

Data obtained from these interviews conducted in 1974 and 1975, in conjunction with informal observations, agency records, census data and community feed-
back, constitute the basis of this report.

The report itself is divided into several sections. In Section III we present the major results found from our survey of Valdez in 1975, and in Section IV these are compared with the reinterviewing of respondents in 1975 in order to determine major changes in the community during the first year of construction. Section V describes the results obtained from interviews with 61 construction camp workers living in Valdez camps in 1975; this information is included to provide some insights to the workforce on the pipeline and its interaction with the Valdez community. Section VI presents data on some of the major social problems that have occurred in Valdez as a result of pipeline impact, and in the final section we have included information on orientations toward future growth in Valdez.

Section III: Valdez 1974--Anticipation of Impact

In the late winter and early spring of 1974 when our first interviews were conducted, Valdez was already showing signs of impact, even though the full initiation of construction was still several months away. True, the physical appearance of the community had not changed greatly and even school enrollments had only increased by 50 from the previous fall. Experiences with impact were tied to the past, when, prior to the pipeline construction itself, the pipe had crossed the docks and high wages had been made in the painting or coating. Still, actual changes there had been: the continued speculation in land, much by outsiders, had begun a number of years previously and had served to tie up most of the land available for development in the community.\footnote{See for example, "Alaska Mystery--Who Financed Big Land Deals?", \textit{Los Angeles Times}, December 6, 1971.} The sale of businesses to external concerns also continued: over half the local businesses had been purchased by outside interests, and the new businesses that opened, including two
banks, were exclusively controlled by outsiders.

The demographic characteristics of the population had also undergone changes. The proportion of children in the community to the working age population had declined since 1970, and the percentage of males had increased from 51% to 58%. Seventeen percent of the people interviewed had lived in Valdez for less than a year, and a total of 36% for less than three years. By December 1973 the total population of Valdez had increased to 1350, a 34% increase over the 1970 census. By 1974 the average Valdezean only knew about one-half of the people in town by name. Several years previously, we were told by the vast majority of our respondents, virtually all people in Valdez knew each other on a personal basis.

In spite of these changes, the community in 1974 retained many of the characteristics of an intimate small town. Attesting to this were the community calendar with the birthdates of residents, the relatively high proportion of people in town who still did know each other on a first name basis, the high proportion of families interviewed who had relatives living in Valdez (59%), and who said that all or almost all of their best friends lived in Valdez (50%), and the high number of families (47%) who would not consider moving away from Valdez. Doors on homes were locked by only a minority of families, although this was changing, and the values stated by people indicated an ability to count on neighbors (91%), define human nature as cooperative (81%), and state that most people were helpful in their relationships with others (94%). Given the high proportion of state and professional employment in Valdez, which is often associated with more formal and less personal relationships, the concept of a small and close community appeared relatively strong.

Social divisions within the town were strong, however, and these divisions were based primarily on length of residence and employment. Twenty-seven percent
of the family heads interviewed had lived in Valdez at the time of the earthquake, and frequently their conversation regarding Valdez pertained to the past and life in the former community. In their social relationships they interacted primarily with other old-timers and they shared many of the same attitudes and values. Included among these were a positive orientation toward the potential benefits of the pipeline, in spite of the fact that only a small minority (14%) actually anticipated work on the pipeline.

In contrast to the oldtimers, a higher proportion of the newer residents (those who had moved into Valdez during the 1965-1972 period), and many of whom were employed professionally, viewed the coming impact with greater hesitancy and in more negative terms. In part, this may have been due to their strong affinity for the small town concept; this group constituted the highest percentage which had mentioned the small town environment as a reason for moving to Valdez. In part, it may also have been due to the concentration of their employment in those social institutions of the community, such as the schools and hospital, which would most directly bear the brunt of problems stemming from impact and rapid population growth. As would be expected, those who had moved to Valdez during the previous two years tended to be both most marginal to the community in their social relationships and most solicitous of personal pipeline benefits, such as pipeline jobs.

Although length of residency represented one major dimension on which the Valdez population was stratified, there were also several others. One's position in the community was strongly influenced by one's place of work: in particular both the Highway Department and the hospital formed a basis for friendship and social groups, and influenced membership in many of the formal organizations that existed in the community. Participation by community members in these organizations prior to impact was relatively high, as were other characteristics of
participation such as voting and City Council attendance. Geographically the community was relatively homogeneous: neighborhoods within the town were not defined as such by residents and the sole meaningful distinction existed between those living in town and the more isolated homes out the Richardson Highway and the Loop Road area. This homogeneity was also evident from an ethnic standpoint: although Valdez is a very dominantly "white" community, 16% of the population in 1970 was Alaskan native, predominantly Aleut-Eskimo. However, most native families were intermarried with whites, many held state jobs, homes were scattered throughout Valdez, and no separate, discernible native community existed.

Valdez in 1974 had both advantages and disadvantages in its relative ability to confront the growth caused by impact. The greatest disadvantage was the small size of the community itself, and the inadequacy of all services and utilities to provide for the demand that would be generated by the growing population. The most important of these was a shortage of housing and the physical infrastructure necessary to expand housing rapidly, a fact that was partly the result of Valdez's recent move to the new townsite.7 Sewer and water systems, the telephone and electrical systems, were all close to maximum capacity use by the existent population in 1974. These systems were dependent on actual shifts in demand for funding expansion, and they could not respond to the acute population change without shortages and delays. In talks with officials in the telephone, electric and city utilities, the lead time for expansion of these services ranged from 21 months for the sewer system to 26 months for the telephone. Because of

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7For example, Valdez had only 299 permanent housing units in 1972-73 compared with 591 for Seward and 426 in Cordova, two communities only slightly larger than Valdez at the time. Cf. Final EIS, Northern Gulf of Alaska, Volume I, pp. 328, 333, 337. The new town was also constructed under strict regulations of the Department of Housing and Urban Development, which resulted in a myriad of legal entanglements concerning use and sale of land, and inevitable delays in the response to market demand for housing.
limited bonding capacity, the schools were forced into a three-stage expansion: actual occupancy of the new elementary school was not achieved until January 1976, 20 months after pipeline construction began.

Planning for an earlier expansion of these and other services had been held to a minimum for various reasons. Foremost among these, a factor mentioned strongly by half of those we interviewed, was lack of support by the state government. Actual commitment of state monies for needs such as school, sewer and water expansion would come, as they did, only when impact was actually demonstrated; the first two million dollar impact grant was not received from the state until three months after construction was initiated.

A second major reason appeared to be a lack of concern for the problems of impact. The early and positive euphoria toward the pipeline, and the uncertainties generated through its delays in the courts, dissipated attention from the needs that would be created once construction began. In addition there existed uncertainty and lack of information over what the pipeline itself would bring to Valdez. In spite of extensive environmental impact studies and numerous local impact meetings and a planning study grant to the city by Alyeska, the oil industry provided little anticipatory information on specific plans or needs for Valdez. At the same time the continuation of negotiations between industry and community as construction approached, precluded the early resolution of many issues. From the standpoint of the city these negotiations were in turn compounded by the assumption of a majority of the Valdez residents that Alyeska could be depended on to do what was in the best interests of the community. A housing and service infrastructure that was already loaded to capacity, therefore, combined with lack of planning, funding and an unaware and naive public attitude toward industry, constituted the major weaknesses for Valdez as it confronted the situation of pipeline impact.
On the positive side, however, Valdez also held several strengths. Most notable among these was local expertise, both within the city administration and outside it, and the experience that had been gained from both the relocation of the town following the 1964 earthquake and the Kenai Peninsula's earlier oil development experience. Not only was good administrative leadership available, but a familiarity in dealing with both state agencies and industry existed. Secondly, although the physical infrastructure supporting residential expansion was at capacity, it was in place and could be expanded without extensive engineering and development work preceding construction. Finally, a significant level of congruence existed between Valdez in 1974 and the future conditions that would be generated by the petroleum industry: shared white middle class values, an experience working for and dealing with large formal bureaucracies, and a positive orientation toward the industry and potential benefits of impact.

The specific attitudes of Valdez residents in 1974 toward impact tended to be somewhat variable. While some opposed all changes that were likely to occur in Valdez, many more viewed the pipeline in highly beneficial terms, most particularly in regard to the increased commercial activity, general population growth, and an expansion in community services. Of all the changes anticipated by all our respondents, slightly more than half the responses were perceived in positive terms. Negative changes most commonly anticipated included inflation and housing shortages, an increase in crime, loss of the small town attributes, negative effects on the environment, and the overcrowding of community resources, in approximately that order. In spite of the fact that both positive and negative effects of development were anticipated, however, most Valdez residents in 1974 were satisfied to view these problems in a more or less speculative manner. Construction and impact approached, and changes were foreseen, but there was relatively little public involvement to either confront or take specific advantage of these
changes. Less than a third of our respondents mentioned taking any steps, and these were almost exclusively individual activities, such as seeking a job, taking security precautions, renting a house or initiating a business activity. Only a very small number of those interviewed had taken specific public action to assist groups or the community to meet those changes that were anticipated. This wait-and-see approach reflects a general attitude consistent with previously noted observations: that many in Valdez anticipated the benefits that would accrue to both individual and community from pipeline development, but without any active commitment on their part to direct these changes. Direction was left to the city administration.

Section IV: Valdez—First Year of Impact

By 1975, Valdez was well into its first year of impact with everyone in town fully aware of the meaning of boom town growth. From a population base of 1350 in January 1974, the town and camp population began a steady increase in the summer of 1974 to a peak of 6512 by July 1975. During the previous summer the 500 workers located at the airport camps had been shuttled back and forth to the terminal site by boat or bus. By April 1975, 1800 men and women lived or worked at Terminal Camp and by July this total had risen to 2672. The town population alone had also grown to over 3500, and the fast movement of the construction project was paralleled by a rapid expansion in businesses, crime, school children and buildings. Demand on services as varied as the hospitals, grocery stores, telephone and ambulance rescue squad had escalated equally.

During 1975, the city issued 135 new business licenses, compared with 65 in 1974. Anchorage-based pipeline suppliers and office supply businesses had set up shop in Valdez, and other new stores catered to the more specialized

demands of a growing and well-paid population. Quality plants and pottery, expensive recreational equipment, stereos and fine silver all made their appearance in Valdez, along with expensive liquor and groceries, modular homes, snow machines, motorcycles, and more trailers. A new doctor, dentist and expanded medical services were established. Operation of the general hospital was taken over by the city, and a state trailer court had been opened in late 1974 to provide housing for State Highway and Harborview Hospital employees. The high pipeline wages were a constant source of conversation: camp workers often joked about how little they did for their high salaries, and others complained of the high cost of living brought by both these wages and the spiraling labor costs that had spread throughout Valdez.

By the time we reinterviewed our original respondents and a new sample in the early fall of 1975, 22 (16%) of the original families had left town. Some of these were professionals who moved on, others were advocates of the small community ethic and could not afford the higher prices or appreciate the stronger money orientation that was spreading in town. Several others had retired or married. Valdez had become a much more work-oriented adult population: even if camp residents are excluded the proportion of the town population aged 19–65 had increased from 60% to 69% from the previous year. If camp residents are included over 80% of the town population consisted of working adults⁹!

The aggregate occupational structure of the community, again excluding the camps, had undergone a massive change in the space of a year¹⁰. The most dramatic of these are the great increases in employment (from 1.0% to 12.7%) by Alyeska and the primary contractors for the pipeline, the increase in employment by other construction firms (from 6.7% to 10.2%), the increase in trucking (from

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⁹Assuming virtually all camp workers are between the ages of 19–65, total (cont.)

¹⁰Specific changes in occupation and employers for all adults aged 20 and over are presented in the Appendices, Tables 1 and 2.
2.0% to 6.0%) and the number who were not employed (from 16.5% to 26.9%). This last category includes predominantly housewives of new families employed on the pipeline, a characteristic quite different from the traditional Valdez family in which a majority of the females are employed. On the other hand, the proportion of public employment in Valdez declined sharply from 40% of all workers in 1974 to under 18% in 1975. This proportional decline can be seen even in those institutions such as the hospital and schools and government which significantly expanded their staffs to accommodate impact growth. These declines highlight the bind these employers felt in both recruiting staff in a more competitive labor market and in coping with demands from a rapidly expanding public. These figures also document the rapid change which took place in Valdez from a community dependent on public employment to one based on construction and the administration or management of the pipeline project.

In spite of this change in occupational structure, however, a surprisingly low level of turnover existed in the jobs held by older Valdez residents. In almost all the occupational and employer categories, changes were minimal, with exceptions limited to a slight increase in employment by Alyeska and Fluor, a decline in proportional employment of former Valdezians at the hospital and as service workers, and a serious decline in employment related to fishing. Overall, however, the data indicate that the change in occupational structure was almost totally due to influx of new residents and employers, with relatively little transition in jobs during the first year by former Valdez residents.

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9 (continued) adult population in the 1975 Valdez Census was 5409 out of a total of 6512.

11 This stability may be seen by comparing the proportional 1974 totals (column 1) with those members of the panel sample who were reinterviewed in 1975 (column 3) in Appendices Tables 1 and 2.
themselves\textsuperscript{12}.

This is seen more clearly by comparing the specific jobs held by the household heads in our panel sample who were interviewed in both 1974 and 1975. Over the 16-month period 30\% of this sample had actually changed their place of employment; of those who had changed almost half had gone to work on the pipeline or for one of the subcontractors. "A high degree of selectivity existed, however, in the types of jobs in which turnover occurred. Fourteen of the 17 people in our sample who were employed at Highways (82\%) remained with their former jobs, as did 10 of the 12 employed at the Hospital (83\%). Conversely, none of the seven employed in fishing in 1974 still did this in 1975. Of those residents holding professional, managerial or technical jobs, 85\% had remained at their former positions, whereas 50\% of those working as laborers in skilled or unskilled employment had changed jobs. In other words, there was a strong tendency for those employed in the higher status and more secure jobs in Valdez to remain with their employment, be it for reasons of professionalism or the protection of benefits and security, whereas those in the less skilled and more insecure occupations turned to the pipeline. From the perspective of the community this can be seen as an attempt to maintain the better, more permanent jobs for the Valdez people themselves, and in the process to preserve the traditions and lifestyles of the community.

Two further changes that were closely related to occupational change in Valdez during 1974 and 1975 were an increase in incomes and the creation of distinct neighborhoods within the city. The per capita income of household heads in our panel rose dramatically from a median individual income of $11,940 reported in 1974 (1973 income) to $24,500 in 1975, while the median family income

\textsuperscript{12}Although no statistical data is available to support this, our observation in 1976 shows an increasing number of older residents seeking and obtaining pipeline work. We feel this may be due to the impending wind-down in construction, and a sudden desire or need to take advantage of the benefits before the opportunity is over.
for all members of the household combined rose from $16,430 to $30,600 in 1975. In addition to these new high levels of reported income, several additional factors warrant attention. The first is that the increase in levels of income was not restricted to those working on the pipeline. They occurred across all occupations as employers in general, including the city and state, were forced to increase salaries to meet local conditions of inflation and to prevent the loss of personnel. In spite of this, increases in income were greatest among those who did work in construction and on the pipeline. Since most of those who moved into pipeline employment came from less skilled, lower paid and more impermanent jobs within the community, the result was a greater levelling of incomes within Valdez: the variance of incomes within the community declined between 1974 and 1975. Although this might be considered an unanticipated and beneficial effect of impact on the community, it may pose significant problems during the post-construction period. When high-paying construction jobs are no longer available and the people who are holding these jobs at present are forced back into traditional pursuits within the community, much higher levels of inequality and necessary adaptations may be anticipated.

One further change in income was the fact that the income levels of our panel sample remained considerably higher than those of families which had moved into Valdez during the previous 18 months. Compared to the $24,500 annual income of household heads and $30,600 family income of our old sample, the median income for newer residents in 1975 was $22,740 for the household head and $26,940 for the combined family income. In contrast to much popular myth, the income levels of community residents appeared to remain significantly higher than those who moved into the boomtown community to work, including those of the administrative personnel who were managing the construction project.

In addition to income levels, a major change occurred in the spatial distribution of Valdez. The influx of workers and new residents and lack of
existent housing in Valdez permanently changed the forementioned homogeneity that had existed in the community. Aside from the work camps themselves, the Alyeska and Flour subdivision has become a definite subcommunity within Valdez; it is clearly distinguished from the rest of the community not only in appearance, general standard of living and the employment of residents, but also in the mutual interests and sharing of friendships and social relations. Although some residents actively participate in organizations of the larger Valdez community, in general allegiances lie with other towns and communities. Instance of resentments and hostilities were reported by respondents from both communities, although these are openly manifested only rarely. The situation of Alyeska and Flour housing, however, is not unique. The State Trailer Park, opened to provide housing for state employees, is one example of this; one subdivision developed outside of town is another example. A strong clustering occurred as many employers were forced to provide housing for their workers and as a consequent small trailer settlements proliferated. It was not until 1976 that the city initiated attempts to centralize trailers in specific areas, such as at the airport, and this has been met with strong resentments by residents. The tendency to cluster in employment-related housing areas has further magnified the importance of employment in defining friendship patterns, and may have long-term consequences for the community.

One result of this growth in locality groups has been the development of small incipient social organizations based in the neighborhood and concerned primarily with neighborhood interests and problems. One outcome of these has been a lower level of public participation in the broader political and social organizations of the Valdez community. This is striking among the newer residents who consistently ranked 50% or more below the longer-term residents in their attendance at City Council meetings, voting at City Council elections and parti-
cipation in the various social organizations of the community. In contrast, no definitive changes in public participation were observed on the part of longer term residents, with indicators such as City Council attendance, voting and membership in formal organizations remaining largely the same as the previous year. In general it appears that most newer residents withdraw into their work and housing clusters and leave the expanded social scene to older Valdez residents, a factor which may tend to reduce conflicts that might otherwise develop within the community. Further, the better and more permanent housing of older residents is reflected in different leisure time pursuits. Although family and informal socializing and outdoor recreation were strong favorites by both groups, older residents favored activities such as reading, church activities and voluntary group work to a greater degree than newer residents, and going out to restaurants and bars to a lesser degree. Compared to their responses of the previous year, older residents showed declines in public areas such as attending large social functions and going to restaurants and bars, and increases in small private social entertainments and family activities. Similar type reponses were obtained from a series of social value questions which showed older residents placing an increased value on friends and neighbors. What may also be very significant is that larger proportions in 1975 also responded more strongly to questions on alienation than they had the year previously, and there was stronger agreement that neither the state nor Alyeska could be depended upon to do what was in the best interest of Valdez.

In summary, major changes have obviously occurred in the Valdez community, but these changes are largely due to the great influx of new residents and the dominant proportion of the population which they presently constitute. However, 13

13 These are aggregate figures and there are very important individual exceptions to them which probably reflect a growing change in leadership in the community; new permanent residents have been elected to both School Board and City
few of these changes have been incorporated into the lives and values of the older Valdez people themselves. Outside of the significant number which have left the community, the primary response or adaptation has been one of guaranteeing the maintenance of traditional values and lifestyles. Where changes have occurred they have been primarily in the area of withdrawing from the more impacted aspects of community life, and reinforcing those positive values and social relationships that were characteristic of former years. Whether this attitude and response to change will permit the community to actively confront and deal with the important issues in its future of course remains for present uncertain.

Section V: Construction Camp Workers

The 61 construction camp workers who were interviewed were residents of the Terminal Camp (30), Keystone (21), and Kennedy (10). The first of these camps is the largest, containing 2300 workers in September 1975 and is located across the bay 15 road miles from downtown Valdez; the latter two are located at the airport with closer communication to Valdez and housed respectively 410 and 120 workers. No interviews were conducted at a fourth camp at Sheep Creek, just outside the city limits on the Richardson Highway. In spite of the fact that all workers interviewed were selected on a random basis, the findings should be treated as somewhat tentative and suggestive. This is due to the small size of the overall sample and the fact that the proportional selection was weighted in favor of the two smaller camps.

General Characteristics of Camp Workers

The popular views of construction camp workers is frequently that of hard-working, hard-drinking men from Outside who have come to Alaska to make a quick

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(continued) Councils, and they are among the most active in groups such as the Chamber of Commerce, Valdez Historical Society and recreationally oriented groups.
full 40% failed to hold Alaska state resident status at the actual time of their initial employment on the pipeline and 19% had come directly to Valdez from residences outside the state. Over 50% had been previously employed in the construction industry, although only 25% had had prior employment experience with the petroleum industry.

On the pipeline the specific employment of those interviewed varied, with the largest categories being heavy equipment operators (31%), unskilled laborers (16%) and bull cooks (13%); the dominant union affiliations were Laborers (28%), Operating Engineers (23%), Teamster's (18%) and Culinary Workers (10%). Gross monthly salaries averaged $3,900 with net take home pay of $2,550. These high levels of pay were mentioned as the most satisfactory aspect of their work, whereas the weather, physical isolation, boredom of work and long working hours were considered the least satisfactory aspects. Attitudes toward the various services provided in the camps were all rated as good or very good by a clear majority of workers. Although their average length of residence in Valdez had only been 3.3 months, most hoped to continue working on the pipeline as long as employment prevailed. Contrary to much public opinion on the dissipation of construction earnings, a majority of the workers held very specific plans for the accumulation and use of savings earned through their wages, and almost half of those interviewed had already set aside half or more of the savings required to meet their potential goals. Our conclusion was that a strong majority of workers used the opportunity of the pipeline work to achieve quite common goals that they probably could not have realized, or not nearly so quickly, through conventional employment.

More specific data on the use of pipeline earnings is presented in Table 5:1 which cites both the proportion of workers interviewed who allocated earnings to each area, and the average amount allocated monthly by all the workers.
Table 5.1 Average Monthly Expenditures of Camp Workers

<table>
<thead>
<tr>
<th>Type of Spending</th>
<th>Percent of All Workers</th>
<th>Average Monthly Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Family expenditures</td>
<td>45.5</td>
<td>$346</td>
</tr>
<tr>
<td>2. Personal expenditures</td>
<td>98.2</td>
<td>282</td>
</tr>
<tr>
<td>3. Travel and R&amp;R</td>
<td>46.3</td>
<td>281</td>
</tr>
<tr>
<td>4. Savings or investment</td>
<td>80.0</td>
<td>1618</td>
</tr>
<tr>
<td>5. Monies sent out of state</td>
<td>30.4</td>
<td>567</td>
</tr>
<tr>
<td>6. Monies spent in Valdez</td>
<td>83.6</td>
<td>184</td>
</tr>
<tr>
<td>7. Savings in Alaska banks</td>
<td>63.6</td>
<td>1227</td>
</tr>
<tr>
<td>8. Expenditures on prostitution</td>
<td>13.6</td>
<td>10</td>
</tr>
<tr>
<td>9. Expenditures on gambling</td>
<td>22.0</td>
<td>17</td>
</tr>
</tbody>
</table>

A vast majority of the earnings is obviously directed into savings and investment, with most of this going into Alaskan banks. Thirty percent of the workers reported sending money out of state, both for investment and family reasons, at an average of $567 for every worker interviewed. Per capita spending on gambling and prostitution were reported as very low, and the reported average spending per workers in Valdez was less than $200 monthly. Given the large number of workers in the camps, however, this signifies a substantial addition to the local economy.

Relations of Camp Workers to Valdez

Given the long working hours and weeks, and the self-confined nature of the camps, it is not surprising that the camp residents show minimal participation in the life of the Valdez community. Only 6% of the camp workers went into Valdez on a daily basis, more than half made one or less trips to town per week, and the average pipeline worker spent a total of only four hours per week in Valdez. In spite of this minimal contact, however, the camps, holding between 2,000 to 4,000 workers15, can obviously signify an important impact upon the community.

15 See Table 3 in the Appendix for a tabulation of pipeline manpower in Valdez from May 1974 through May 1976.
Although activities of workers in Valdez are varied, the only ones in which a majority of camp residents participated were in shopping and at bars, and only a minimal proportion were involved in other forms of social, civic or recreational activities of the community. Even at bars few workers are regular habituees: only 2% stated that they spend more than six hours each week in a Valdez bar. Since the most common activities of shopping, drinking and banking are either those which are undertaken alone or in the company of other pipeline workers, it is hardly surprising that almost half the camp workers knew no Valdez residents on a personal basis. As seen in Table 5:2, drug store items, liquor and reading materials headed the list of service items purchased in Valdez. On these and other items in Valdez the average camp resident reportedly spent $184 monthly; 40% of the workers actually spent less than $100 per month in Valdez.

Table 5:2 Items Purchased by Camp Workers in Valdez

<table>
<thead>
<tr>
<th>Purchase of Items During Past Month</th>
<th>Not Purchased</th>
<th>Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Drug store items</td>
<td>43.3</td>
<td>56.7</td>
</tr>
<tr>
<td>2. Drinks (at bars)</td>
<td>43.3</td>
<td>56.7</td>
</tr>
<tr>
<td>3. Packaged liquor</td>
<td>45.0</td>
<td>55.0</td>
</tr>
<tr>
<td>4. Reading materials</td>
<td>46.7</td>
<td>53.3</td>
</tr>
<tr>
<td>5. Restaurant food</td>
<td>56.7</td>
<td>43.3</td>
</tr>
<tr>
<td>6. Clothing</td>
<td>58.3</td>
<td>41.7</td>
</tr>
<tr>
<td>7. Personal gifts</td>
<td>74.6</td>
<td>25.4</td>
</tr>
<tr>
<td>8. Radio, stereo equipment</td>
<td>76.3</td>
<td>23.7</td>
</tr>
<tr>
<td>9. Personal services</td>
<td>83.3</td>
<td>16.7</td>
</tr>
<tr>
<td>10. Prostitutes</td>
<td>83.9</td>
<td>16.1</td>
</tr>
<tr>
<td>11. Groceries</td>
<td>88.3</td>
<td>11.7</td>
</tr>
<tr>
<td>12. Sporting goods equipment</td>
<td>94.9</td>
<td>5.1</td>
</tr>
<tr>
<td>13. Other</td>
<td>93.2</td>
<td>6.8</td>
</tr>
</tbody>
</table>

The social participation of workers in the Valdez community was minimal. Only an extremely small minority of several percent participated in the various political, education or cultural activities of the community; slightly larger proportions attended church services or informal social gatherings. Although
the residents of Valdez who work in the camps and a few other camp residents
who have continuing ties to Valdez do participate in the life of the town,
the work schedule and isolation of the camps clearly limit active involvement
outside of the economic sphere. In spite of this social isolation, the attitudes
of camp workers toward Valdez were generally positive. Only 28% stated that
they disliked the community and only 7% that they disliked the people of Valdez.
The scenery and overall qualities of the small town, combined with the avail-
ability of services which are non-existent in most pipeline camps, were those
attributes which workers liked most. Factors liked least were the lack of
more services and high prices, a view shared by the community as well, and some
of the negative aspects of impact such as crowding.

The social relations existent between town and camp can best be described
as benign. Although certain resentments toward camp workers exist due to acts
of rowdiness and because workers have taken over as clientele in various rest-
aurants and bars, little open animosity is evident. Fights, where they have
occurred, are normally between pipeline workers themselves, and not between
members of the community and camp, and cases of complaints against camp residents
are equally rare. In several cases, general animosities toward the camp are
more than compensated for by significant contributions which individual camp
workers have made to the town. To a large extent, however, Valdezians themselves
have withdrawn from participation with workers, avoiding those bars and in-
stitutions most commonly frequented by camp residents, including the camps
themselves. A modus operandi of mutual toleration consequently exists, often
with limited or misinformation of the realities in which the two separate com-
munities live. Given the working hours and conditions under which both groups
live, this situation is probably unavoidable, even though it is unfortunate
that the common interests and resources which workers could contribute to the
Valdez community are not shared in more significant ways.
Section VI: Social Problems and Community Adaptations Related to Pipeline Impact

In spite of their early optimism toward pipeline development, most people in Valdez clearly recognized and anticipated a temporary increase in social problems and personal inconveniences. Most of these concerns, however, were restricted to problems such as crime and alcohol abuse, that could be directly related to fast money and the construction town environment. On the other hand, relatively few had anticipated the colossal demands that would be placed on conventional community services from a rapidly expanding population. Due to the lag time involved in funding and planning, community response to these issues had to await a significant disruption in service deliveries. The 1975 survey requested residents to rate their satisfaction with various community services\textsuperscript{16}; of these, telephone service, grocery, and restaurant service, parks and recreation, and planning and zoning received the poorest ratings. The telephone system, groceries, and housing and sewage disposal (planning and zoning) all represented classic cases of system overloads in which disruptions occurred.

For example, to the twelve telephone circuits and 1114 installed telephones in January 1974, 4262 telephones and 32 more circuits had been added by January 1976. In spite of this, the system remained overloaded with both local and long distance calls difficult to make: even minimum system expansion required one to one and a half years in order to obtain REA financing, the engineering studies for system design and both the buildings and equipment for local expansion. In the case of groceries, bare shelves and severe shortages forced many residents to shop in Glenallen, over 100 miles away, in the summer of 1974, prior to the eventual opening of a second store. In spite of expanded sales, food prices have remained high: throughout the first years of impact food prices remained relatively constant at levels about 140\% of Seattle prices\textsuperscript{17}.

\textsuperscript{16}See Tables 4 and 5 in Appendix for the specific ratings received by these services.
\textsuperscript{17}See Table 6 in the Appendix for a comparison of Valdez, Seattle, Anchorage (cont.)
A major lack of housing constituted probably the greatest impact problem in Valdez during 1974 and 1975. The July 1975 census of Valdez showed 10% of the population living out of campers or boats, another 41% in trailers, and 8% in motel rooms, apartments and bunkhouses provided by employers. Over half the housing, consequently, was of a temporary nature. Low cost housing was virtually impossible to obtain, with rentals to newcomers ranging anywhere from $500 to $1500 per house per month, and trailer space rent from $75 to $140 per month. The full impact of this shortage fell on new community residents: prospective construction workers and their families and new state and city personnel. Various individuals, including school teachers, specifically left the community due to inadequate or high cost housing, and it undoubtedly served to discourage further immigration that might otherwise have taken place.

Various factors contributed to the shortage in housing, not the least of which were the bureaucratic and legal restrictions imposed by HUD as a carry-over from development of the new townsite. No definitive community policy on housing emerged during the first year and a half of impact, other than the allocation of state impact monies for additions to the water and sewage systems. The first stage expansion of these systems was not completed until late in 1975, and they have since eased the market considerably. In the meantime private contracts were made to supply land to Alyeska for professional housing with utilities supplied by Alyeska, and the city auctioned its few available trailer-size lots at prices on either side of $10,000 each. In spite of specific zoning requirements, the unwritten policy of the city became one of tolerating exemptions to codes in order to provide for the temporary needs of individual residents.

17 (continued) and selected other Alaskan communities of comparable size on a 45 item food list. The results over the period are consistent with a similar price survey from December 1974 to October 1975 done in the Copper Center area. See Table 11, p. 24 of One Year Later: Pipeline Impact Report, Copper River Valley, October 1975, by Thea Smelcer.

18 See Anchorage Daily News, "Trailer Space Rents Not Subject to Review", 7/9/76.
In the process temporary housing proliferated. In June 1976 the city initiated attempts to centralize trailer development at the airport, a move carried out in spite of opposition from various sectors within the community. The extremely high cost of permanent housing, which has escalated to approximately $90 per square foot, and difficulty in obtaining bank mortgages in some contested subdivision areas have severely restricted the construction of any permanent housing in Valdez.\(^{19}\)

Although other service areas were also severely impacted, they were able to adapt more quickly to changing conditions. Similar to the situations of housing, however, the process involved has been one of dealing with problems from a long term perspective only after short term reaction to critical needs. In the case of schools the first year of impact was characterized by double shifting, use of temporary modular units purchased with state impact funds, and temporary classrooms in other community facilities. Bond elections held in 1974 and 1975 finally authorized expansion of the elementary and high schools; actual occupancy of the new elementary school did not occur until January 1975, 20 months after pipeline construction began.

In contrast, other services received relatively high ratings of satisfaction from Valdez residents. Among these was the Valdez Volunteer Fire Department, an organization of considerable community pride in which many men participate. Also ranked relatively high was the Valdez Police Department; with additions in staff from two to six in 1974-75, to nine in 1975-76, and to 11 in 1976-77, this constituted one of the few services which had received a substantial increase in staffing. To a large extent this policy was consistent with the forementioned and foremost concern of Valdez residents concerning impact, namely

\(^{19}\)Based on conversations with bank representatives in June 1976 and with City Building Inspector in January 1976.
forms of deviant behavior such as alcoholism, drug use, disorderliness and violence, prostitution and crime in general. Monthly statistics on criminal complaints and arrests from the Valdez Police Department, seen in Table 6:1, validate these attitudes in regard to crime. Complaints and arrests increased dramatically during 1974 and 1975, at a rate far in excess of the three- to five-fold increase in population\textsuperscript{20}, with steady increases in larcenies, drunken disturbances and alcohol-related traffic offenses. Both prostitution and gambling activity existed in the community over the period, but both have been contained with as little publicity as possible\textsuperscript{21}.

<table>
<thead>
<tr>
<th></th>
<th>1/74</th>
<th>2/74</th>
<th>3/74</th>
<th>4/74</th>
<th>5/74</th>
<th>6/74</th>
<th>7/74</th>
<th>8/74</th>
<th>9/74</th>
<th>10/74</th>
<th>11/74</th>
<th>12/74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criminal Complaints</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>17</td>
<td>26</td>
<td>28</td>
<td>45</td>
<td>41</td>
<td>60</td>
<td>39</td>
<td>37</td>
</tr>
<tr>
<td>Arrests</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>11</td>
<td>13</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>1/75</td>
<td>2/75</td>
<td>3/75</td>
<td>4/75</td>
<td>5/75</td>
<td>6/75</td>
<td>7/75</td>
<td>8/75</td>
<td>9/75</td>
<td>10/75</td>
<td>11/75</td>
<td>12/75</td>
</tr>
<tr>
<td>Criminal Complaints</td>
<td>21</td>
<td>37</td>
<td>81</td>
<td>67</td>
<td>61</td>
<td>63</td>
<td>105</td>
<td>110</td>
<td>114</td>
<td>124</td>
<td>161</td>
<td>122</td>
</tr>
<tr>
<td>Arrests</td>
<td>5</td>
<td>7</td>
<td>21</td>
<td>33</td>
<td>17</td>
<td>14</td>
<td>10</td>
<td>22</td>
<td>19</td>
<td>36</td>
<td>40</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Valdez Police Department, Monthly Reports

\textsuperscript{20}Dependent on whether or not camp populations are included from the total. The camps maintain their own security personnel whose records are not included in the above statistics.

\textsuperscript{21}A federal grand jury in San Francisco has recently indicted several Valdez residents on gambling and prostitution charges stemming from a two year investigation. See "9 Indicted for Pipeline Sex Scheme", Anchorage Daily News, July 9, 1976.
In order to finance the necessary expansion in community services, the Valdez City Budget has increased dramatically from $586,000 in FY1973-74 to 20.8 million in 1975-76. Revenues have been obtained from various sources. Following the passage of legislation in the 1974 session that gave to the state the right of taxation over the petroleum industry and local capital investments, Valdez became dependent upon state impact monies for the financing of major community projects. As seen in Table 6:2, $3.6 million in impact funds has been received from the state up to the end of the state impact aid program in July 1976. Of this, $2 million was received as a block grant and utilized for expansion of the police department and other city services and for the city's share in the costs of the expanded sewer system; $1.6 million has been received in discretionary grants from special impact legislation passed by the 1974 legislature, and this was utilized primarily for the purchase of school modulars and other school expenses, temporary camper facilities, and for city expenses incurred in taking over the general wing of the state's Harborview Hospital.

<table>
<thead>
<tr>
<th>Amount Requested</th>
<th>Amount Received</th>
<th>Date</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>$687,500.00</td>
<td>$900,000.00</td>
<td>July 18, 1974</td>
<td>October 1, 1974</td>
</tr>
<tr>
<td>$627,000.00</td>
<td>$252,000.00</td>
<td>September 13, 1974</td>
<td>June 20, 1975</td>
</tr>
<tr>
<td>$430,342.52</td>
<td>$264,500.00</td>
<td>May 27, 1975</td>
<td>July 8, 1975</td>
</tr>
<tr>
<td>$150,000.00</td>
<td>$189,028.11</td>
<td>September 30, 1975</td>
<td>July 1, 1976*</td>
</tr>
<tr>
<td>$74,615.69</td>
<td></td>
<td>May 5, 1976</td>
<td></td>
</tr>
<tr>
<td>$158,778.00</td>
<td></td>
<td>May 5, 1976</td>
<td></td>
</tr>
</tbody>
</table>

12,128,236.21--Total Requested  $1,605,528.11--Total Received

B. Block grant: $2,046,000.00 June 3, 1974

*Excludes $50,000 dispersed in July 1976 but included in the $900,000 received in October 1974.

Source: Valdez City files collaborated by Division of Local Governments, Department of Community and Regional Affairs, Anchorage and Juneau.

22The 1976-77 budget includes $11.2 million from sale of bonds for new school (cont.)
The fact that none of these state monies were received until after construction began obviously prevented efforts to defray impacts in an anticipatory manner. In actuality considerable delays were involved in the delineation and initiation of projects once these funds were received by the city.

In addition to state impact monies, the sale of bonds and local taxation has been used by the city to raise revenues. In 1974 and 1975 bond issues were passed for construction of new elementary and secondary schools; a third proposal to sell bonds to raise revenues for loans to Alyeska for construction of the terminal facilities was approved by voters in 1975 but has not received legal sanction. Finally increased revenues were obtained through continuation of a city sales tax and property taxes whose assessed valuation increased from $1,102,186.00 in 1974 to a projected $4.29 million in 1976. Mill rates for property taxes ranged from 10 to 15 mills depending on tax zones throughout the first two years of impact. By the spring of 1976 the financial situation of Valdez had improved to the point where the city sales tax and water and sewer fees were discontinued, and a constant mill rate generated more than four times the 1974 revenues. Ninety percent of this tax burden was borne by the assessed value on Alyeska's terminal facility.

Insufficient data was collected to evaluate effectively the influence of pipeline construction in creating human stress, and the psychological effects which this might have had. However, certain indications of stress exist in the community. Between 1974 and 1975 the divorce rate among the panel increased from 6.7% to 11.0%, an increase which in part was caused by married families leaving Valdez while more divorced and single people stayed. During the year that one of us resided in Valdez, there were also at least two suicides, an alcohol-

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(continued) construction and over $4 million for other capital improvements.
related death, and eleven possible heart attacks. There was also a sharp
increase in ambulance rescue squad calls in 1975, particularly those concerned
with stress-related incidents. Alcohol-related crimes also increased sig-
nificantly as did crimes of violence, including the rape of a young police
dispatcher. Although data is lacking to document this, there was certainly
a higher frequency of fights and arguments, many, but not all, belonging to
construction and pipeline workers.

Already mentioned was the tendency of Valdez residents to react to the
increased pressures and stress of impact by retreating into the confines of
family and private activities. In spite of the obviously beneficial influence
which this may have, this transfer of pressures created by crowding and increased
public responsibility is not without costs. Although the numbers were small,
twice as many of the panel respondents mentioned increased marital conflict when
compared with newer residents.

In addition, the significant emigration of 17% of our original sample out
of Valdez during the first year of impact constituted a significant loss for the
community, particularly since various of these individuals were important com-
community leaders. Although various factors contributed toward decisions to leave
Valdez, changes in the community and negative aspects of impact were instrumental
factors in a number of known decisions.

No significant special impacts have been noted in the native community of
Valdez, due to their low levels of distinct cultural activity and strong accult-
uration into the dominantly white community. In addition this population of
natives is small and with the increase in size of the community becoming pro-

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23 From a monthly average of 3.6 ambulance calls for the January to June 1974
period to 14.3 in the first half of 1975 and 12.5 by the second half of 1975. The
number of stress-related ambulance calls increased by 143% from 7 in 1974
to 17 in 1975. This index includes heart attack, gunshot wound, drug over-
dose, death and alcohol-related calls. It does not include motor vehicle
accident transports, industrial accidents or other routine ambulance calls.
portionately smaller, from 16% in 1970 to less than 5% in 1975. Under the Native Land Claims Settlement Act each individual enrollee living in Valdez has received approximately $1990 since 1973 as their payment in lieu of a land settlement. Since Valdez is a first-class city with boundaries that encompassed the terminal site and pipeline corridor before enactment of the Settlement Act, land selections by the Chugach Region, which includes the Valdez area natives, could not include part of the pipeline corridor, as was possible in Ahtna Region, north of Valdez.

The Chugach Native Corporation, the profit-making arm of the region, has had three long-term and one short-term minority subcontracts at the terminal site, for a total of approximately $3.5 million. These include a manual labor site preparation contract, oil spill contingency program, a weather boat at the Valdez Narrows and short-term barge transport in early 1974 before the road link between Valdez and the terminal site was completed. These contracts have provided employment for Valdez natives; it is estimated that almost every native family now has a pipeline worker, whereas formerly many were unemployed or fished for very low wages. On the other hand, Valdez natives represent a very small group within the larger Chugach region, and no significant programs of economic or social development have been initiated as in other communities of the state. As a result, Valdez natives have had to confront the impact of the pipeline, including employment, on a largely individual basis similar to most members of the white community. At the same time, mention of racial antagonisms or negative aspects of impact on natives in Valdez have been totally lacking from our interviews in Valdez. Although natives in the community are entitled to medical and health benefits, indications are that those natives enrolled in the labor unions are placing increased reliance on these agencies as sources of
personal benefits.  

Finally, questions have inevitably been raised concerning the influence of construction and the pipeline on the physical environment. To the vast majority of Valdez residents these have not or do not pose significant problems: less than 20% viewed air, noise, or water pollution as constituting serious problems in Valdez. Although larger percentages considered crowding, the over-use of recreation facilities and litter to be serious, in none of these cases did this constitute a majority of those interviewed. Although environmental concerns may become relevant for Valdez residents in the future, they are not so at present.

Section VII: Future Orientations

In spite of the acute problems and many inconveniences associated with impact, a generally high level of satisfaction exists within Valdez on the changes and progress which the community has made. Among our sample of former residents, only one-third felt that the changes were worse than they had anticipated; over 40% expressed satisfaction with the developments to date and almost 25% that the community had progressed in better terms than anticipated. A strong degree of consensus existed on the future of Valdez. Even in the height of impact only a small minority (13%) would want to turn back the clock and be rid

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24. The Valdez terminal site has continuously employed approximately 300 natives, although it is unknown what fraction of this total Valdez natives comprise. As of April 1976, 442 "opportunities" had been offered to a total of 200 individual Chugach natives. Over 100 Chugach natives have participated in pre-job or on-the-job training programs. The Native Counselling Program established under the Alyeska contract acts as an advocate for natives facing termination or other problems. During the early stages of the Terminal Camp's construction counsellors spent a larger fraction of their time providing counselling and personal services to natives bewildered by or alienated from the camp's institutional environment. Counsellors now devote most of their time to guiding natives into fuller participation in union activities, benefits and in encouraging contacts with union functionaries. These observations are based on interviews with Alyeska Pipeline Service Company representatives in Anchorage and Valdez and on interviews with Chugach Native Region representatives in Anchorage and Valdez, June and July 1976.
of the pipeline altogether, a number almost as small as those who view the current situation of impact and boom to be desirable in itself (12%). The vast majority of older Valdez residents (75%) consider the overall changes as desirable, while at the same time they recognize the need for a more permanent population, and greater breadth and stability in the growth of their town.

To a surprising degree Valdezians reflect the typical quandry of those who are in favor of continued growth, but who at the same time fear for the traditional values being lost and costs invoked in the development process. There is but little doubt that the average Valdezian bears a significant commitment to continued growth. This may in part reflect acceptance of an inevitable process over which Valdez has little control. More likely it is a response to the previously lost opportunities for economic benefit, and the recognition that the present situation is a rare opportunity which the community cannot afford to ignore. Boom towns also become easily addicted to growth: they attract new residents with vested interests in maintaining the high rate of development. In Valdez this can be seen in the active commitment toward OMAR and the El Paso proposal for an all Alaskan gas pipeline that might also be routed through Valdez. However, even a majority of our old sample respondents favor continued development of the oil industry in Valdez, a rather significant finding since few are directly employed in the industry and virtually all are affected by the adverse aspects of impact. On the other hand a majority also state their opposition or resignation to the changes that are currently occurring in the state, and they are concerned with the loss of friendliness and cooperation among people, and the increased crowding and population density. These constitute the same factors that residents claim would make them move away from Valdez, and the actual exodus of those from the community who cherish these values may well explain much of the lack of organized opposition to growth, and particularly petroleum development. On the other hand, economic well-being and
jobs, and the greater availability of new facilities and community services, are the benefits which residents feel they derive from development. In the final tradeoff, most are willing to accept these benefits, for any of the short and long term costs which they may entail.

In spite of their willingness to trade some important values in the short run for long-term economic stability, these same values still influence their attitudes toward the future development of Valdez. Whereas, 65% of the old sample favor further oil development in their community, even more (88%) favor expansion of the Port of Valdez, indicating strong support for expansion of the traditional economy and culture. Newer residents fail to discriminate between these alternatives, favoring both equally. Similarly the average Valdezian would like to see his town have an optimal population of just over 3000 people, actually less than existed than at the time they were interviewed. Valdez residents do not anticipate their community becoming a large urban industrial center, but one which combines the optimum of small size with a high standard of economic well being. This attitude also reflects upon the adaptability of Valdez residents: many of the major changes (such as going to work on the pipeline) have been avoided, and personal lifestyles have been marginally changed in order to accommodate pressure points within the community. Individuals have less leisure time, for example, or change their eating and drinking habits based on crowding or prices in bars and restaurants, but friendships and associations remain the same and basic lifestyle patterns are not greatly altered. The main thread of these traditional values can be seen in positive answers to value questions concerning the small town, and a way of life which they are strongly interested in maintaining.
TABLE 7: Percent of Panel Answering "Somewhat Important" or "Very Important" to Small Town Values

(1) Living in a quiet community 95%
(2) Having friends from a wide age range 93%
(3) Being able to make yourself many of the things your family needs 90%
(4) Having a high-paying job 72%
(5) Getting involved in community activities 67%
(6) Knowing everyone or almost everyone in town 64%
(7) Being able to hunt and fish for a good part of your family's food needs 53%

On the other hand one must seriously question whether retention of these traditional lifestyles is consistent with the active energies that will be required to create change of a desirable nature. There are several areas of the Valdez economy that might be developed to augment oil development and provide local employment, but these will depend largely on decisions that are already made or currently being made by the community. For example, although many in Valdez favor development of an expanded tourist industry, tourism in itself is not consistent with a community in which over 50% of the residents are housed in temporary dwellings, where industrial use dominates the waterfront, and where even a majority of residents agree that recreational facilities are very inadequate.

At the present time, older Valdezians constitute a numerical minority within their own community, and a highly active and forward-looking citizenry will be required if they are to determine the direction which future change will take. Adaptation to impact by withdrawal to conventional traditions may be absolutely necessary in the short run and preservative in nature. However, it will not provide the influence necessary for the direction and steering of change,
particularly if the ailments of many standard industrial towns are to be avoided. Valdez has been fortunate in having successfully negotiated the early euphoric period of pre-impact and that stage where decisions and actions had to be taken to cope with temporary crisis needs. It now appears to have initiated a more difficult stage of rational long-term planning that will permanently affect the type of community which Valdez is to be. It enters this stage in a relatively secure financial position and with elements of both old and new leadership that is capable of making the difficult decisions that will be necessary if qualities of the former town are to be preserved. These decisions will be contingent upon the development of a more active community.

Summary and Conclusions

Finally, the lessons that other communities may learn from Valdez's experience with impact are many. It is not our intention here to fully list or expound upon them all. However, we would like to mention a few important social conclusions which we have noted both with reference to the Valdez case, and from our observation on Valdez in the context of other Alaskan coastal communities that are confronted with impact.

1. The economic boom and rapid population growth that is attributed to pipeline construction has caused serious short-term dislocations within the community, most particularly in the areas of housing and public utilities.

2. In spite of great pressures and requirements for change, institutions within the Valdez community have shown themselves capable of accommodating a large influx of population without the occurrence of social problems which are beyond the ability of the community to handle. Several specific factors may have contributed to this accommodation which may not be typical of other coastal communities in Alaska. First a relatively elaborate service and institutional infrastructure existed in Valdez prior to impact and more importantly a rela-
tively high level of sophistication and technical expertise existed among the
general public and particular community leaders. Secondly, the overall attitude
of the community toward pipeline construction was positive: Valdez did not
experience organized opposition to petroleum development which might have
served to polarize issues and paralyze the necessary expansion of services.
Thirdly, no radical departure occurred in traditional lifestyles or the opera-
tion of dominant institutions. Relatively little turnover took place in the
personnel holding leadership positions in key organizations, and major policy
depositions were neither contemplated or instituted. More dramatic impacts might
have occurred if major institutional or program changes had been attempted.
Fourth, state impact monies were made available during the impact period to pro-
vide for the development of various key services and staffing needs.

3. To a large degree the pipeline construction has not drastically or
immediately affected the lifestyles of older Valdez residents, but actually has
served over the short run to reinforce these values and lifestyles. Although a
certain number of former residents may have left Valdez and others sold busi-
nesses rather than adapt to a rapidly changing economy, these also reflect
accommodations to preserve traditional lifestyles. Although new groups in the com-
munity may reflect very different lifestyles and behaviors, these have not over
the short run replaced or destroyed traditional values and relationships.

4. The fact that most of the transient population in Valdez has been
housed separately in self-confined construction camps outside of town has greatly
reduced the strain on most Valdez institutions and services.

5. Similar to the construction camps, the self-confined location of hous-
ing for professional and management families has served to separate them from
the Valdez community. In contrast to the construction camps, however, these
new residents with their families place an additional demand on city services.
Although open animosities between them and the older Valdez community have been
minimized, they still exist, and the two groups act as two distinct subsystems within the larger community. Many Valdezians would support a more integrated housing pattern which encouraged greater interaction and cooperation between these groups in order to reduce the current divisiveness.

6. Assumptions behind population projections must be carefully scrutinized in each individual Alaskan community. Different public policies may have a strong influence in determining or changing the expected amount of population growth. In Valdez, for example, lack of both housing and the physical infrastructure to support more housing not only created hardships for incoming migrants, but probably discouraged the population growth that would have occurred otherwise.

7. There is a definite need for state and federal agencies to facilitate planning in communities prior to the actual occurrence of impact, and to streamline regulations to accommodate acute impact needs. In the case of Valdez, services should have received anticipatory funding based on projected demand in order to prevent the disruption of service. Of particular importance is the absolute necessity for establishment of a funding policy to subsidize local planning prior to impact.

8. Communities that are subject to impact must be encouraged and supported to develop short-term plans for the impact period, as distinct from long-term plans. Unless short-term and long-term planning is clearly distinguished and then coordinated, the political pressures stemming from impact will demand the compromising of any long-term planning efforts. In the case of Valdez, zoning regulations, based on a former Comprehensive Plan, frequently had to be sacrificed in order to meet acute housing needs. Where not sacrificed they frequently served as impediments to the establishment of needed temporary facilities. If specific short-term planning for the temporary boom is coordinated with long-term plans for the permanent development of the community, strains
in the community will be reduced and the opportunity for realizing long-term plans enhanced.

9. Federal environmental impact assessments, such as that prepared for the trans-Alaska pipeline, provide only minimal information that can be used by individual communities for planning. Either federal guidelines must be changed, or the state should assume the responsibility of preparing impact statements with maximum participation from local communities. Such studies must serve to integrate impact analysis with actual planning needs. Information must be collected and analyzed in the impact assessments in such a way that it forms a basis on which local planning and decision making can be developed.

10. As part of the early planning process for prospectively impacted communities, the communities should be encouraged to develop alternative proposals and sites for their industrial development. The general euphoria that existed in Valdez at the time the pipeline was initiated precluded any hard analysis or decisions on the directions which local development would take. As a result decisions had to be made after the process of change had already been initiated. If communities do initiate preliminary and alternative proposals for local development, both public awareness and the later collection of more specific information will be facilitated. This would substantially assist both local planning and decision-making.

11. Greater specification of plans must be required of all impacting industries, with the requirement that they supply the community before impact with all necessary information on the various types of community services which they will require during all phases of exploration, development and production. School needs is one obvious requirement, but needs in the areas of housing, utilities, recreation and other basic services should also be estimated and given to the community for planning purposes. Often the private sector is
poorly informed about potential demand until faced with overload. Both city, state, and impacting industry could provide more information to local businesses and services to help anticipate growth before it actually occurs.

12. Lack of housing may constitute one of the most important impact problems in small coastal communities. It was the most important single issue in Valdez. It caused distinct hardships for many; it created problems for supplemental staffing of local services; it created animosities between groups with differential access to adequate housing; it generated high personnel turnover in key medical and educational services, and therefore affected the continuity of these services; and the reliance on temporary dwellings and trailers has probably shaped the housing patterns that will predominate in Valdez for the foreseeable future. Skyrocketing land values and the inflationary construction wages have elevated housing costs to levels that greatly supersede conventional mortgage ceilings. In addition, banks in Valdez were unwilling to amortize loans over conventional long-term period. The result is that construction of new and permanent housing has become a luxury available to only the very few. We recommend that a state program be developed whereby monies from oil revenues are made available to private banks and individuals in order to supplement conventional mortgage loans for permanent housing construction.

13. It should also be recognized that the ability of a small community to raise revenues through taxation will only be fully realized late in the impact period when the assessed values of these properties reach their peak. Federal and state funding policies should assist communities in this dilemma: they will have to absorb a larger ratio of expenses for infrastructure during the pre- or early stages of impact, with the community absorbing an increasing ratio during the later stages when local assessments have risen.

14. Communities should not underestimate the facilities and resources which development industries can provide for meeting new community needs. In the case
of Valdez, Alyeska Pipeline Service Company has provided considerable emergency help to the community, and has also provided valuable resources to the community in terms of school teachers, City Council members, and other leadership personnel. On the other hand, Alyeska has been somewhat reluctant to support efforts which would permanently improve conditions or facilities in Valdez, an act which many feel it is not an obligation of industry to perform.

In summary, Valdez has responded well during its first two years of impact, in a direction which is consistent with basic public attitudes and objectives toward continued growth. Stricter adherence to many of the recommendations outlined above would have facilitated this process, and prevented many of the hardships incurred and incurring during impact. The preservation of those traditional attitudes and lifestyles which have been observed during the first two years of impact, however, should not be assumed to constitute a final result of impact. The impact of the pipeline is a continuous process, and the short-term changes that have been described may be largely transitory. As Valdez confronts future issues, such as a gas line, post impact slump or achievement of a more stable economy, future changes will be inevitable in the life of this town.
### APPENDIX

**TABLE 1: Occupational Categories of Adult Members of Valdez Families**
*Interviewed in 1974 and 1975*

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Total 1974</th>
<th>Total 1975</th>
<th>Panel Sample&lt;sup&gt;1&lt;/sup&gt; 1975</th>
<th>New Sample&lt;sup&gt;2&lt;/sup&gt; 1975</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. High professionals (graduate degree)</td>
<td>1.6</td>
<td>1.3</td>
<td>0.9</td>
<td>1.7</td>
</tr>
<tr>
<td>2. Other professionals</td>
<td>11.0</td>
<td>8.2</td>
<td>10.4</td>
<td>6.2</td>
</tr>
<tr>
<td>3. Managers, officials</td>
<td>9.3</td>
<td>11.3</td>
<td>13.7</td>
<td>9.1</td>
</tr>
<tr>
<td>4. Technical and protective service workers</td>
<td>11.1</td>
<td>10.1</td>
<td>12.3</td>
<td>8.3</td>
</tr>
<tr>
<td>5. Clerical and sales</td>
<td>12.5</td>
<td>10.1</td>
<td>14.6</td>
<td>6.3</td>
</tr>
<tr>
<td>6. Craftsmen</td>
<td>6.7</td>
<td>7.7</td>
<td>6.1</td>
<td>9.1</td>
</tr>
<tr>
<td>7. Operators, truck drivers</td>
<td>6.3</td>
<td>13.3</td>
<td>9.4</td>
<td>16.6</td>
</tr>
<tr>
<td>8. Laborers</td>
<td>3.3</td>
<td>3.1</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>9. Service workers, including orderlies, food service, etc.</td>
<td>13.0</td>
<td>5.3</td>
<td>6.1</td>
<td>4.6</td>
</tr>
<tr>
<td>10. Fishing boat owners, crew and cannery workers</td>
<td>5.2</td>
<td>2.2</td>
<td>1.5</td>
<td>2.9</td>
</tr>
<tr>
<td>11. Housewife</td>
<td>11.2</td>
<td>22.1</td>
<td>11.8</td>
<td>31.1</td>
</tr>
<tr>
<td>12. No occupation</td>
<td>4.6</td>
<td>2.2</td>
<td>3.8</td>
<td>0.9</td>
</tr>
<tr>
<td>13. Retired</td>
<td>3.5</td>
<td>2.9</td>
<td>6.1</td>
<td>0.0</td>
</tr>
<tr>
<td>14. Other</td>
<td>0.6</td>
<td>0.2</td>
<td>0.5</td>
<td>0.0</td>
</tr>
</tbody>
</table>

100.0% 100.0% 100.0% 100.0%

<sup>1</sup>Respondents who were residents of Valdez prior to 1974

<sup>2</sup>Respondents who moved into Valdez after January 1974
### TABLE 2: Employer Categories of Adult Members of Valdez Families Interviewed in 1974 and 1975

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alyeska and major subcontractors</td>
<td>1.0</td>
<td>12.7</td>
<td>7.5</td>
<td>17.3</td>
</tr>
<tr>
<td>2. Pipeline construction firms and independent contractors</td>
<td>6.7</td>
<td>10.2</td>
<td>4.2</td>
<td>15.6</td>
</tr>
<tr>
<td>3. Local non-construction, including docks, cannery, utilities</td>
<td>7.3</td>
<td>8.5</td>
<td>10.4</td>
<td>6.7</td>
</tr>
<tr>
<td>4. Local commercial establishments</td>
<td>8.0</td>
<td>8.5</td>
<td>8.0</td>
<td>8.9</td>
</tr>
<tr>
<td>5. Trucking</td>
<td>2.0</td>
<td>6.0</td>
<td>2.8</td>
<td>8.9</td>
</tr>
<tr>
<td>6. Harborview Hospital</td>
<td>16.9</td>
<td>5.1</td>
<td>8.5</td>
<td>2.1</td>
</tr>
<tr>
<td>7. Highway Department</td>
<td>10.2</td>
<td>5.1</td>
<td>9.0</td>
<td>1.7</td>
</tr>
<tr>
<td>8. Other government: city, state, and federal, including school employees</td>
<td>13.7</td>
<td>7.6</td>
<td>12.3</td>
<td>3.4</td>
</tr>
<tr>
<td>9. Self-employed</td>
<td>12.7</td>
<td>6.7</td>
<td>11.3</td>
<td>2.5</td>
</tr>
<tr>
<td>10. Not employed, including housewives</td>
<td>17.6</td>
<td>26.9</td>
<td>20.3</td>
<td>32.9</td>
</tr>
<tr>
<td>11. Retired</td>
<td>3.9</td>
<td>2.7</td>
<td>5.7</td>
<td>0.0</td>
</tr>
</tbody>
</table>

| | 100.9% | 100.0% | 100.0% | 100.0% |
TABLE 3: Alyeska and Contractor Manpower at Valdez, 1974-1976

<table>
<thead>
<tr>
<th>Month</th>
<th>1974</th>
<th>1975</th>
<th>1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td></td>
<td>1085</td>
<td>2870</td>
</tr>
<tr>
<td>February</td>
<td></td>
<td>1298</td>
<td>3172</td>
</tr>
<tr>
<td>March</td>
<td></td>
<td>1461</td>
<td>3272</td>
</tr>
<tr>
<td>April</td>
<td></td>
<td>1797</td>
<td>3350</td>
</tr>
<tr>
<td>May</td>
<td>162</td>
<td>2063</td>
<td>3713</td>
</tr>
<tr>
<td>June</td>
<td>258</td>
<td>2475</td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>487</td>
<td>2672</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>696</td>
<td>2822</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>1058</td>
<td>3147</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>1026</td>
<td>3318</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>1057</td>
<td>3042</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>663</td>
<td>3016</td>
<td></td>
</tr>
</tbody>
</table>

Source: Alyeska Pipeline Service Company, Anchorage Office, 1976
## TABLE 4: Community Service Ratings: 1975

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Telephone service</td>
<td>94.5%</td>
<td>3.2%</td>
<td>2.3%</td>
</tr>
<tr>
<td>2. Grocery Service</td>
<td>60.5</td>
<td>26.4</td>
<td>13.2</td>
</tr>
<tr>
<td>3. Restaurant service</td>
<td>54.5</td>
<td>30.0</td>
<td>15.5</td>
</tr>
<tr>
<td>4. Parks and recreation</td>
<td>53.8</td>
<td>29.3</td>
<td>16.8</td>
</tr>
<tr>
<td>5. Planning and zoning</td>
<td>48.6</td>
<td>33.5</td>
<td>17.8</td>
</tr>
<tr>
<td>6. Schools</td>
<td>32.1</td>
<td>32.7</td>
<td>35.3</td>
</tr>
<tr>
<td>7. Hospital service</td>
<td>25.5</td>
<td>32.3</td>
<td>42.2</td>
</tr>
<tr>
<td>8. Road maintenance</td>
<td>22.5</td>
<td>20.7</td>
<td>56.7</td>
</tr>
<tr>
<td>9. Fish and game management</td>
<td>22.1</td>
<td>30.1</td>
<td>47.9</td>
</tr>
<tr>
<td>10. Police service</td>
<td>17.7</td>
<td>46.3</td>
<td>36.0</td>
</tr>
<tr>
<td>11. Garbage service</td>
<td>16.6</td>
<td>22.0</td>
<td>61.5</td>
</tr>
<tr>
<td>12. Fire protection</td>
<td>11.8</td>
<td>28.5</td>
<td>59.7</td>
</tr>
</tbody>
</table>

## TABLE 5: Retrospective Community Services Ratings: 1974

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Parks and recreation</td>
<td>64.3%</td>
<td>29.6%</td>
<td>6.1%</td>
</tr>
<tr>
<td>2. Telephone service</td>
<td>53.8</td>
<td>33.3%</td>
<td>12.9</td>
</tr>
<tr>
<td>3. Police service</td>
<td>42.9</td>
<td>36.9%</td>
<td>20.2</td>
</tr>
<tr>
<td>4. Planning and Zoning</td>
<td>42.9</td>
<td>36.9%</td>
<td>20.2</td>
</tr>
<tr>
<td>5. Restaurant service</td>
<td>35.5</td>
<td>49.5%</td>
<td>15.1</td>
</tr>
<tr>
<td>6. Road maintenance</td>
<td>34.0</td>
<td>35.9%</td>
<td>30.1</td>
</tr>
<tr>
<td>7. Hospital service</td>
<td>32.3</td>
<td>37.4%</td>
<td>30.3</td>
</tr>
<tr>
<td>8. Schools</td>
<td>22.0</td>
<td>46.2%</td>
<td>31.9</td>
</tr>
<tr>
<td>9. Fish and game management</td>
<td>19.1</td>
<td>32.6%</td>
<td>48.3</td>
</tr>
<tr>
<td>10. Grocery service</td>
<td>14.6</td>
<td>49.0%</td>
<td>36.5</td>
</tr>
<tr>
<td>11. Garbage service</td>
<td>7.0</td>
<td>19.0%</td>
<td>74.0</td>
</tr>
<tr>
<td>12. Fire protection</td>
<td>5.9</td>
<td>19.6%</td>
<td>74.5</td>
</tr>
</tbody>
</table>
TABLE 6: Average Retail Price of 45 Food Items in Valdez and Selected Alaskan Communities of Similar Size, and Anchorage: 1974-76*

<table>
<thead>
<tr>
<th>Date</th>
<th>Sitka</th>
<th>Seward</th>
<th>Kenai-Soldotna</th>
<th>Valdez</th>
<th>Anchorage</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 1973</td>
<td>$40.29</td>
<td>$39.76</td>
<td>$39.45</td>
<td>$44.21</td>
<td>$37.00</td>
</tr>
<tr>
<td>June 1974</td>
<td>32.54</td>
<td>37.75</td>
<td>37.09</td>
<td>39.17</td>
<td>34.04</td>
</tr>
<tr>
<td>Sept. 1975</td>
<td>36.36</td>
<td>42.48</td>
<td>41.82</td>
<td>41.74</td>
<td>37.66</td>
</tr>
<tr>
<td>% of Seattle</td>
<td>120</td>
<td>140</td>
<td>136</td>
<td>138</td>
<td>124</td>
</tr>
<tr>
<td>December 1975</td>
<td>36.37</td>
<td>41.57</td>
<td>41.35</td>
<td>42.31</td>
<td>36.04</td>
</tr>
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<td>% of Seattle</td>
<td>120</td>
<td>137</td>
<td>136</td>
<td>140</td>
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<tr>
<td>March 1976</td>
<td>34.90</td>
<td>41.13</td>
<td>40.35</td>
<td>40.77</td>
<td>35.53</td>
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<td>119</td>
<td>141</td>
<td>138</td>
<td>139</td>
<td>122</td>
</tr>
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</table>

*Source: Quarterly reports for Alaska's Food Prices, March 1973--March 1976, Cooperative Extension Service, University of Alaska
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