

**DAM THE RIVER:** *COPY*

The Proposed Days Creek Dam and the  
Human Ecology of the South Umpqua River  
Basin, Oregon

by

Thomas C. Hogg and William D. Honey

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2 weeks*

Department of Anthropology

Oregon State University

Corvallis, Oregon

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## PREFACE

The experience upon which this research was based was unique in a number of ways. It was a novel situation for us so far as entering into a social research contract with the U.S. Army Corps of Engineers was concerned. It also was the first time that the Portland District Office of the Corps had contracted with an academic institution for social research. The work was the first in situ impact projection that we had attempted.

The chronology of events for work served to provide us with an education rarely achieved within the halls of the academy. In the spring of 1975 we received a phone call from the District Office of the U.S. Army Corps of Engineers in Portland, Oregon, asking if we would be interested in being considered for a contract to conduct a Social Effects Assessment of the proposed Days Creek Dam in Douglas County, Oregon. After giving an affirmative answer, we submitted a statement of credentials and awaited a response. It was forthcoming in terms of an invitation for us to write a proposal for the project. This was accomplished in a very short period in anticipation of a July 1, 1975 contract date.

The budget submitted was considered by the Corps to be too high and negotiations were required prior to contracting. Negotiations in Portland on the budget brought an agreement on funds for support of our effort but left the difficult deadlines for a draft and final report. Not fearing some additional hours of work and realizing the training potential of the research for our students, we entered into the contract

in the middle of July, 1975. Background research on history and ecology already had begun and most members of a team of interviewers and project assistants had been selected. So, too, we had begun the work of developing items for the survey instrument, drawing on other similar surveys and upon our own past instruments used in impact analysis.

Interviewing of agency personnel in Douglas County and pulling out all locally based literature was conducted in the remainder of July and August. The region-wide survey was delayed in part because of a lack of information provided by the Corps on alternatives to Days Creek Dam. These had to be incorporated into the survey instrument. Final revision and approval for use of the survey instrument was gained early in September and the survey as conducted in the final two weeks of the summer period.

Transfer of the data to code sheets and an initial computer run were accomplished in late October. Several bugs in the program had to be worked out which required an additional run and extended the delay into November. The draft report analysis and writing was pushed in late November and early December in order to meet the December 12 deadline.

The draft report revision proceeded continuously through January 13, 1976 in preparation for a review conference on the draft. Recommendations of the Portland conference were incorporated into the final report which was developed and submitted, after a contract modification, on March 29, 1976. Three supplemental reports of a background and general information nature were developed following April 1 and

submitted to the Corps of Engineers on June 18, 1976.

Throughout the work, representatives of the Corps made suggestions for acquisition of more data, many of which were not covered in the initial research matrix on which the contract was established. When practical, and within our research plan, we attempted to comply with their needs. In a few instances, however, the additional wishes of the Corps could not be met. The compensation we received for the additional effort came in terms of contract modification to extend deadlines rather than to pay for additional personnel or services required.

The final report was to have been printed by the Corps of Engineers but its length and other "unknown reasons" precluded real agreement. Only our narrative summary and an "in house" abstract of findings were included in the Environmental Impact Statement. Because of these circumstances we found it necessary to seek additional funds for printing. Benefactors are noted in the acknowledgements section of this monograph.

It goes without saying that dealings with the elaborate bureaucracy of the Corps were sometimes vexing, sometimes satisfactory, and at all times educational. A separate report could be made on these transactions. Suffice it to say here that the vast majority of the people with whom we dealt were fully professional and helpful. We certainly would enter into subsequent work arrangements with the Corps--only this time a whole lot wiser as to self-protective "do's and don'ts."

Clearly the Days Creek experience goes beyond a simple report and supplements to the Environmental Impact Statement. It also was an

investment into human resources--our research staff and students. It already has been a vehicle for an M.A. thesis and is serving as a partial data base for two more. A host of papers and articles are planned, including some on methodology and theory. More importantly the work provides a comprehensive data base on the feelings and attitudes of people directly affected by the proposed dam at Days Creek. In that sense, then, it represents a public input to the planning process.

## ACKNOWLEDGMENTS

Acknowledgments always prove difficult for fear of some omission. We would like to express our gratitude to the following persons who worked on field interviews: William Pierson, Thomas Hatley, Sandra Profeta, Robert Born, Sharyl Short, Miriam Mahaffey, Marvin Bartel and Valorie Dahl. Their support during the long and difficult hours is appreciated and we thank them for their relentless efforts.

We would also like to thank the agencies of Douglas County, public and private, who volunteered time to give us additional information concerning their views and orientations on the proposed Days Creek Dam. We cannot thank enough the downstreamers, stayers and relocatees who took the time to give us information concerning their lives and sentiments.

Extraordinary thanks go to the staff who carried on the most difficult task of preparing the manuscript. Kathleen Manolescu edited and prepared the final manuscript. Andrea Campbell, Lynne Saporito, Linda Morgan, Cindy Sharratt, Dawn Saunders and Dorene Barnes accomplished the typing of countless drafts as well as the final manuscript. Each did this in addition to their normal heavy work loads.

As in the past research efforts undertaken by the investigators, Dr. Roy A. Young, Vice President for Research and Graduate Study at Oregon State University was most helpful in suggesting avenues of support and ways in which the process could be accelerated to meet

critical deadlines. Funding for the printing of this monograph was provided by the Oregon State University Foundation, and the College of Liberal Arts and Water Resources Research Institute at Oregon State University. Without their financial support we would have been unable to publish the results of our research. Each deserves a very special thanks.

Finally, responsibility for the accuracy and authenticity of this report lies with the principal investigators. We greatly appreciate the mutual assistance during the long hours.

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## Chapter I

### INTRODUCTION: BACKGROUND AND DESCRIPTION OF THE RESEARCH

#### General Orientation

The orientation brought to this research by the investigators falls within the anthropological rubric of cultural ecology (Rappaport R. A. 1971). The main theme and framework of cultural ecological studies calls for an examination of the relationship between cultural and environmental phenomena (cf. Vayda A. 1969:XI).

The technologies, behaviors and attitudes of people are cultural phenomena. They are presumed to be linked to each other and to environmental features of the human habitat. Not only are the cultural features relatable to environment in the present, they also are the product of relationships that have prevailed in the region's past. Indeed, the intelligibility of cultural patterns comes in terms of our ability to relate them to environmental situations of the past as well as in the present.

One of the unique features of human culture is its transmissibility through time. The mutually supportive and sustaining characteristics of peoples' technologies, behaviors and values develop and are refined as human beings gain experience in and more completely adapt to a given habitat. As environmental changes occur there must also occur

a realignment of the features of peoples' cultural patterns, if a subsequent adaptation is to be made. On the other hand, changes within a cultural system may require modifications of the environment and, in fact, these changes may be of a continuing nature. The history of the American West shows quite graphically how a given value system, Manifest Destiny, for example, led to continual environmental modification. No small part of the white settlement of the West and the widespread use of its resources can be related to the prevailing values which dictated that frontiers were to be conquered and the wilds brought under human control.

Just as technologies, behaviors and values of people generally are cultural phenomena, so, too, are the actions and values of the people of the South Umpqua River Basin. The past and present choices of these people for gaining a living, establishing and maintaining communities and justifying or explaining their existence, relate strongly to their habitat. The choices that they have made and continue to make are, on a personal or institutional level, cultural responses to the demands that they have perceived to be operating in their setting. The history of these people has established many of the values out of which they base their present actions and, in part at least, determines the manner in which they perceive both opportunities and limitations in their present lives.

In this research we are addressing a number of the present relationships that exist within the cultural patterns of the people of the South Umpqua River Basin. Our objective is to make these intra-cultural relationships more intelligible by examining, in turn, how

components of the cultural system relate to present and proposed changes in the environment of the region. In this case the objective is directed at the proposed Days Creek Dam to be located just upstream from the community of Days Creek, Oregon. The setting for analysis is the entire South Umpqua drainage system. An examination is made of the cultural and environmental relationships that currently exist and are anticipated to develop in the future.

The approach we have selected employs the concept of systems, which in a cultural sense means patterned technologies, behaviors and values of human beings in a given setting. These are appropriately viewed as continually changing and adjusting to both their own internal dynamics and to a host of external factors that people perceive to exist in their environment. The history of cultural systems in various parts of the world discloses first that evolution and adaptation of such systems are not always assured. Cultural extinction, stemming from forms of maladaptation, is as common, if not more common, than continued evolution. Within any given cultural system of the present it should be recognized that not all of the responses or choices that people make turn out to be adaptive in either the long or short run. The ultimate measure of evolution and adaptation is a future in which the culture retains its integrity. Second, the study of ethnographic data reveals that not all components of cultural systems are developed or directed in a manner that is environmentally pertinent. Many features of culture, including technological choices and responses, have been shown to be counter mechanisms to

environmental constraints (cf. Spicer, 1952) and, both in the short and long run, carry a potential for maladaptation.

The systems concept, when employed in cultural ecological studies, should be used in a framework acknowledging cultural-environmental harmony, conflict and irrelevancy.

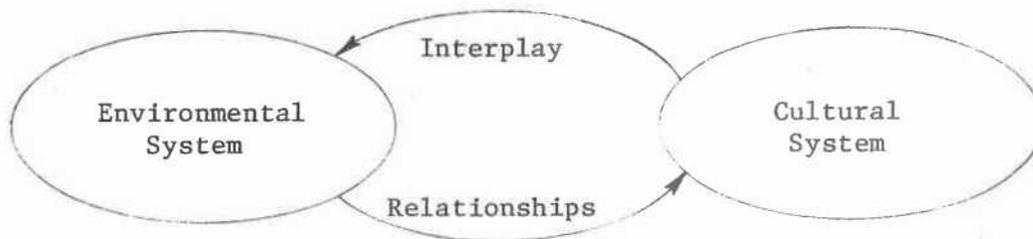


FIGURE 1. CULTURAL-ENVIRONMENTAL SYSTEM INTERPLAY

Adaptation and longer term evolution of cultural systems depends upon the extent to which harmony is established or maintained. The greater the magnitude of cultural activity the greater the extent to which environment is impacted, and the greater the reciprocal feedback on the cultural system. In cases in which limited human technology is employed in a flexible environment, the feedback is more limited because of the environment's carrying capacity. In cases where elaborate technology is employed, given the same environment, the environmental feedback on the cultural system is more pronounced. The interplay of cultural and environmental systems is thus subject to a number of qualifications which determine the extent to which human cultural systems are evolving and adapting or are otherwise changing.

Assessments of evolution and adaptation are made exceedingly difficult by a host of factors. Not the least of these is the matter of criteria selection and use in the assessment, including the kind and amount of information chosen to be employed in the known parameters of cultural-environmental interplay. Since the cultural milieu of water resource development possesses such enormous breadth and the process of social (cultural) impact assessment is only beginning to be adequately developed, a sensible approach would appear to call for general, exploratory inquiry out of which standardized criteria might be developed. Social scientists and developers alike must be mindful that research orientations must be of sufficient breadth to assure inclusiveness and adequacy in explanatory or interpretation models (cf. Kaplan 1964:207-68). They must also be aware that human beings themselves, including researchers and developers, set the parameters of their "good or bad", "better or worse" adaptation and alter their environments to assure the good or the better (Klingeman et al 1971:28). In the development of our own orientation we have tried to avoid known pitfalls that derive from ethnocentric and conceptually narrow approaches to water resource development impacts. Still, the constraints of time and money have placed limitations upon this effort.

Our orientation to the question of adaptation of the cultural systems of the people of the South Umpqua River Basin requires answers to five major questions (Smith, C. L. and T. C. Hogg 1971).

1. Does the present cultural-environmental relationship promote the physical well-being of the region's inhabitants?

2. Does the present cultural-environmental relationship provide for the maintenance or enhancement of the livelihood, i.e., subsistence, of the people of the area?
3. Does the present cultural-environmental relationship allow for a development of community, both in terms of satisfying individual social needs and in terms of the development and maintenance of institutions?
4. Does the present cultural-environmental relationship allow for sufficient communication to transmit meaningful and necessary knowledge and information between individuals and communities?
5. Does the cultural-environmental relationship allow for sufficient innovation so as to permit a cultural diversity necessary for cultural continuance in the changing environment?

These questions address what can be considered instrumental cultural functions. The functions clearly are related and in any given circumstance can be met singly or multiply by one or several institutions. The major consideration is their instrumentality to the survival of human beings and their cultural system in a given ecological province.

With respect to the proposed Days Creek Dam, the questions serve as a guide to evaluative criteria in a full cultural sense. Concern should be with the extent to which the proposed facility and/or its alternatives limit or provide opportunities with respect to (1) population physical well-being, (2) livelihood or subsistence, (3) community, (4) communications and (5) innovation. Should present cultural-environmental circumstances disclose that the above mentioned functions are being met, then the effects assessment should reflect a judgment of the adaptation of the cultural system. Should the functions not be met, then the assessment should specify the extent of maladaptation.

Obviously, the assessment should examine the effect of the proposed facility and/or its alternatives on the adaptation-maladaptation circumstance of the setting.

### Limitations and Purposes of the Research

This study focuses primarily upon the community function of the cultural-environmental system interplay. In slightly different terminology, we are dealing explicitly with social effects assessment, both in terms of social attitudes and in terms of social behaviors of the people of the South Umpqua. We are not treating in detail each of the instrumental cultural functions.

It is important to note that the concept of social effects assessment implies that technological change, such as a major dam or reservoir, creates or is the cause of certain social effects. It is equally important to recognize that cultural changes in the social domain of attitudes and behaviors can and do have effects upon the relationships within the technology of the culture. Our concern here is with the former, not the latter.

The immediate limitations in our study then are apparent: it does not treat the full cultural context of the proposed technological change (Days Creek Dam) and it does not examine the reciprocal effect of social systems and their attendant values on the proposed technological change. A complete cultural assessment would do both, given sufficient time and a sufficient resource base.

Nevertheless, our purposes in this research are to describe and explain relationships between proposed water resource development and the social attitudes and behaviors of the people of the South Umpqua River Basin. In order to assure some greater degree of inclusiveness for the cultural context in which this development is planned to occur, we herein make reference to the ecological province and the history of the area. It is the cultural-environmental interplay that in large measure makes the behaviors and values of the people intelligible phenomena. It is, after all, the history of the region that has established the processes affecting the present behaviors and attitudes of the people to be reached by the project.<sup>1.</sup>

#### The Research Design and Methods

The research design for this project was modified from a socio-cultural systems model developed by Hogg (1965,1966,1970,1971) and by Honey (1975) in previous water resource and cultural change research efforts. The model incorporates elements of a matrix of variables established generally by Section 122 of the River and Harbor and Flood Control Act of 1970 (PL 91-611) and more specifically by the Land Use and Resource Conservation Act of 1975 (H.R. 3510), along with the specific wishes and needs of staff members of the U.S. Army Corps of Engineers. As previously mentioned, the design also includes ecological

<sup>1.</sup> A similar approach was utilized by Hogg and Smith in their study of the social impacts of water resource development in the Santiam River Basin of Oregon (1970).

and historical reference.

The model generally presumes a cultural system's efforts to maintain a viable population base, to differentially exploit natural environment for subsistence, to allow for human aggregation tendencies, to establish substance of and means for communication and to sustain and manage innovation through the provision of limitations and opportunities for change. These system functions are conceived to operate in and through economic, political, social, environmental and other subsystems (Hogg 1966) and to explicitly relate the cultural system's features to environment. The subsystems are defined by constituent variables which for purposes of this research are developed in two classes: human organizational variables and perceptual-attitudinal variables. They too, have environmental correlates. Figure 1 shows the model's chief components. As has already been mentioned, primary emphasis for this research is the social subsystem component.

TABLE 1  
SOCIO-CULTURAL SYSTEMS

|   | Economic<br>Subsystem | Political<br>Subsystem | Social<br>Subsystem | Magico-<br>Religious<br>Subsystem | Aesthetic<br>Subsystem |
|---|-----------------------|------------------------|---------------------|-----------------------------------|------------------------|
| Perceptual-<br>Attitudinal<br>Dimension | Ec P-A                | Po P-A                 | So P-A              | MR P-A                            | Aes P-A                |
| Human Organi-<br>zational<br>Dimensions | Ec Ho                 | Po Ho                  | So Ho               | MR Ho                             | Aes Ho                 |

Data sources for the research consisted of: field observations; interviews of individuals through a questionnaire schedule; interviews with individuals in key or informed positions through an open-ended technique pertaining to the variable under study; publications of local and other agencies; monographs, books, and periodicals; census data; and atlases and other enumerative data sources. Environmental data were obtained from observations, interviews and from a review of written materials on the region. Chief sources of information on the environment were libraries, governmental agencies (including the Corps of Engineers) and private agencies. Organizational data were obtained primarily from interviews with relocatee, stayer and downstream population samples, and secondarily from observations and literature-document searches and reviews. Perceptual and attitudinal data were derived primarily from a population sample through questionnaire administration and secondarily from open-ended interviews providing data to serve as a qualitative check on questionnaire-derived data.

#### Survey and Sampling

One of the most challenging features of the research was the development of a technique surveying the region's downstream, stayer and relocatee populations. Downstreamers were designated as those people living in and upstream from Canyonville, whose present residences are not directly affected by the proposed dam and reservoir.

The procedure called for data capable of allowing analysis of representative whole area features, comparison of primary and secondary impact areas and inter-population comparisons (see Figure 2).

Insofar as the stayer (9%) and relocatee (.5%) population components were very small in proportion to the downstream components, a simple random area sample would not meet the analytical requirements for comparisons. What was needed was a procedure allowing for the selection of a representative sample that would allow interpopulation comparisons without any bias-producing weighting from small strata (cf. Alder, H. G. and E. D. Roessler 1968). The following procedure was developed.

The sample was drawn from two continuous areal contexts: first, the specified secondary impact area from the North Umpqua Bridge (Interstate 5) near Winchester, including the South Umpqua Basin lower drainage area to River Mile 90 and the area to the south to, but not including, Canyonville, and second, the primary impact area including Canyonville and upstream to Jackson Creek within the confines of the upper South Umpqua River Basin (see Figure 3). The secondary impact area included the major communities of Roseburg, Winston-Dillard, Myrtle Creek and Riddle and their rural environs. The primary impact area included the settlements of Canyonville, Days Creek, Milo, Tiller and Jackson Creek and their environs (see Figure 3).

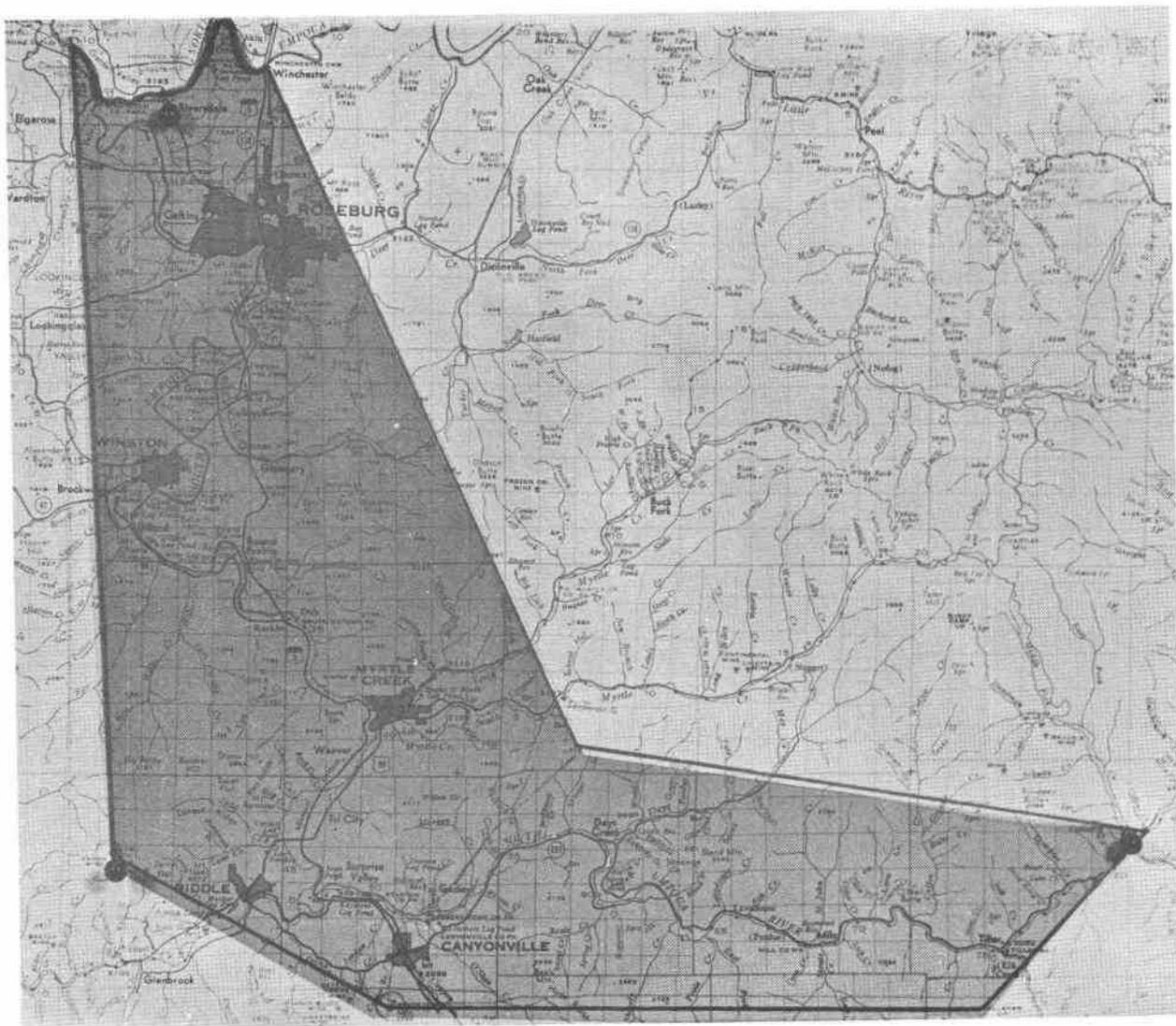


FIGURE 2. SAMPLE AREA MAP

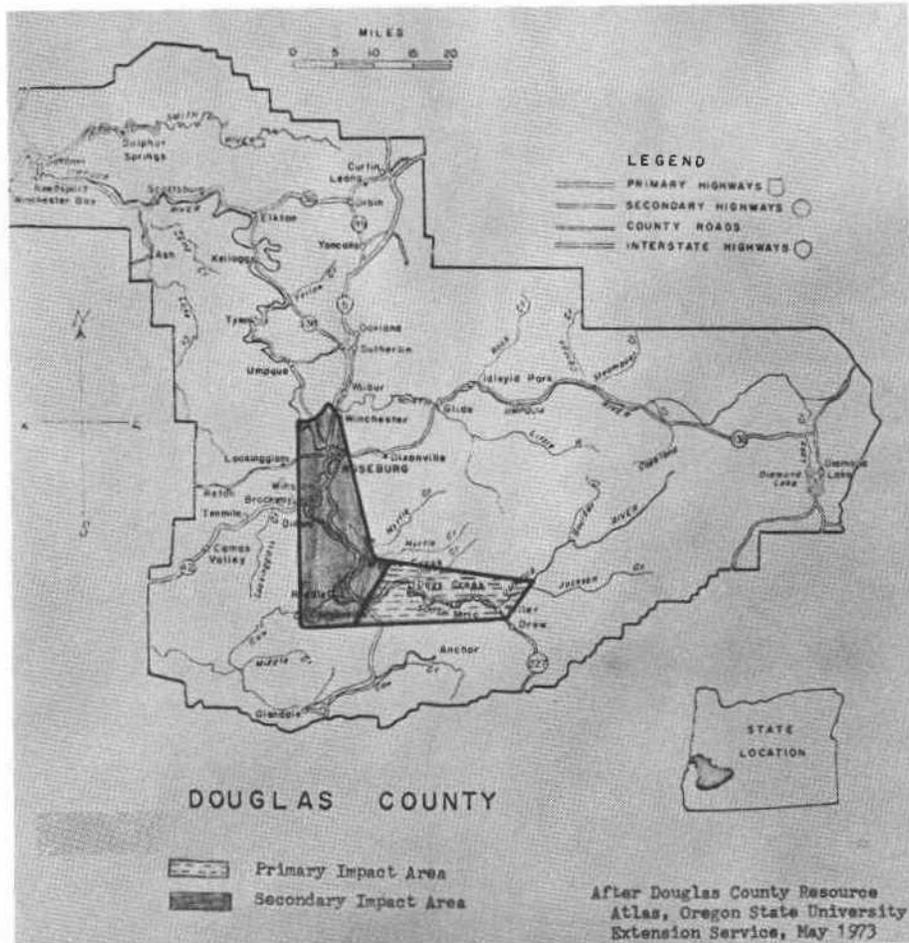


FIGURE 3. PRIMARY AND SECONDARY IMPACT AREAS

The population sample was drawn from customer billing registers of the offices of Pacific Power and Light Company at Roseburg and Myrtle Creek. These two offices served the entire region plus the North Umpqua drainage. The whole area sample was drawn from both offices as a population universe. We employed a 14.5 overdraw estimator corresponding to the percentages of commercial and industrial accounts, and another 20% overdraw to accommodate personal, commercial and industrial outlets not in the confines of the impact areas. A standard skip interval and a random number start for the employment of the skip were used. After the

overdraw, samplers eliminated accounts that fell outside the areas. A whole area draw of 265 was taken in order to achieve an appropriate sample size of 195.

The second sample (for the primary impact area) was drawn only from the Myrtle Creek registers which were treated as a distinct second universe. In this case, another overdraw was necessary since the Myrtle Creek registers contained customers from the secondary impact area as well as commercial and industrial customers. A primary impact area draw of 250 was taken from Myrtle Creek in order to achieve a sample of 148 residential customers from the primary impact area. Insofar as this random sample contained only four persons listed as relocatees on the relocatee list offered by the Corps of Engineers, and that this would not meet statistical requirements for separate treatment of relocatees, it was necessary to select still a third sample, at least 50 persons designated as relocatees. A random sample was selected in the same manner as before, employing a table of random numbers and a standard skip interval determined by the proportion of the desired sample to the universe.

This procedure provided the researchers with the following samples: (A) a randomly selected whole area sample consisting of downstreamers (176), stayers (18), and relocatees (1); (B) a randomly selected upstream (primary impact area) sample consisting of stayers (144), and relocatees (4); and (C) a randomly selected relocatee sample consisting of 51 persons.

TABLE 2  
RESIDENTIAL SAMPLE DRAW

|                  | Whole Area Sample |             | Primary Impact Area Sample |             | Relocatee Sample |             | Total Number |
|------------------|-------------------|-------------|----------------------------|-------------|------------------|-------------|--------------|
|                  | Number            | % In Sample | Number                     | % In Sample | Number           | % In Sample |              |
|                  |                   |             |                            |             |                  |             |              |
| Downstreamers... | 176               | 90          | 0                          | 0           | 0                | 0           | 176          |
| Stayers.....     | 18                | 9           | 144                        | 97          | 0                | 0           | 162          |
| Relocatees.....  | 1                 | 1           | 4                          | 3           | 51               | 100         | 54           |
|                  | <u>195</u>        | <u>100</u>  | <u>148</u>                 | <u>100</u>  | <u>51</u>        | <u>100</u>  | <u>392</u>   |

By selecting the sample in this manner it was then possible to move through the area in one interview sweep, starting in Roseburg and working through the secondary impact area to the primary impact area. The integrity of the separate samples was maintained, even though the interviewers' movements were continuously upstream. Respondents were field coded according to their area sample designation, and according to their downstreamer, stayer, relocatee population designations. The figure below shows the residential samples drawn and interviews completed.

Limitations in the use of probability sample data are well known (cf. G. Sjoberg and R. Nett 1968). Probability sampling, while expedient from the point of view of time and money, is affected by the strictures that social organization may impose (Ibid., 156). It presumes a unity of the social universe that may not exist and many times it cannot

TABLE 3  
RESIDENTIAL INTERVIEWS CONDUCTED

|                 | Whole Area         |            | Primary Impact Area |            | Relocatees |            | Total Number |
|-----------------|--------------------|------------|---------------------|------------|------------|------------|--------------|
|                 | Number             | %Total     | Number              | %Total     | Number     | %Total     |              |
|                 | Downstreamers..... | 135        | 90                  | 0          | 0          | 0          | 0            |
| Stayers.....    | 14                 | 9          | 122                 | 97         | 0          | 0          | 136          |
| Relocatees..... | 1                  | 1          | 4                   | 3          | 51         | 100        | 56           |
|                 | <u>150</u>         | <u>100</u> | <u>126</u>          | <u>100</u> | <u>51</u>  | <u>100</u> | <u>327</u>   |

TABLE 3A  
RESIDENTIAL INTERVIEWS CONDUCTED  
WITH PERCENTAGE DRAW

|                   | Percentage Draw |                     |            |       |
|-------------------|-----------------|---------------------|------------|-------|
|                   | Whole Area      | Primary Impact Area | Relocatees | Total |
| Downstreamers.... | 77              | 0                   | 0          | 77    |
| Stayers.....      | 78              | 85                  | 0          | 84    |
| Relocatees.....   | 100             | 100                 | 100        | 100   |
| Average*.....     | 77              | 85                  | 100        | 83    |

\*Note: Average computed on total sample draw.

meet the tests of social resistance, the requirements of speed, limited resources and so on. The above mentioned procedure presumes our sample unity only with respect to either sample area or to respondent identity as a downstreamer, a stayer, or relocatee.

The questionnaire made use of items from a number of other social surveys<sup>2</sup> and allows for additional comparisons to be made between the Days Creek Survey results and other social effects assessments accomplished elsewhere.

#### Analysis of Data

Items derived from directed responses of the survey were pre-coded. Open-ended items were post-coded after initial typological analysis to determine ranges and to classify responses. Codes were transferred from questionnaires to code sheets and were keypunched to computer cards for processing.

Treatment of data has involved the use of the computer facilities at Oregon State University for tabulations and the calculation of frequency distributions. Using the OS-3 (Fortran IV) system and a SIPS program, runs were first made to isolate variables in accordance with (1) whole area-primary impact area and (2) downstreamer, stayer and relocatee variables. The calculations of standard deviations, the use of chi square tests and other correlational measures were accomplished

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<sup>2</sup>. These surveys included the Santiam (Hogg), Paintsville (Burdge et al) questionnaires.

on subsequent runs after tabulation and precise frequency distribution analysis and only on those variables pertaining to definite hypotheses or signifying close correspondence.

The design ultimately is directed at the purposes and objectives of identifying the directions and rates of social change occurring in the impact areas (1) without proposed construction of the Days Creek Dam and (2) if the Days Creek Dam is to be constructed. The alternatives to the proposed dam specified by the Corps of Engineers, a series of smaller dams, downstream levee projects, flood plain evacuation and a dry reservoir, are examined in terms of their projected impacts on the people and social systems of the primary and secondary impact areas.<sup>3</sup> The following table illustrates the comparative framework of the research.

TABLE 4  
COMPARATIVE FRAMEWORK

|                          | Change Paradigm A<br>with no construction | Change Paradigm B<br>with dam construction | Change Paradigm C<br>with alternatives to construction |
|--------------------------|---|--|--|
| Primary<br>Impact Area   | A <sub>1</sub>                            | B <sub>1</sub>                             | C <sub>1</sub>   |
| Secondary<br>Impact Area | A <sub>2</sub>                            | B <sub>2</sub>                             | C <sub>2</sub>   |

3. A supplemental report was developed on alternatives. They are treated generally in the body of this report.

Key social circumstances addressed by the research design include the following:

1. Description of the social system of the research setting without the project.
2. Projection of the probable impact of the proposed action on the social systems of the setting.
3. Identification of the probable adverse social effects of the action which cannot be avoided or mitigated through purposive actions.
4. Identification of probable irreversible or irretrievable commitments of resources which would be involved in the proposed action.
5. Projection of the relationship of local short-term social uses of the environment with the maintenance and enhancement of long-term productivity of the environment.
6. Assessment of the probable social effects of alternatives to the proposed action.

The format for addressing these information categories and providing descriptions and projections of the social profiles of the area includes: an historical overview, a statement on the human ecology of the research setting, a social profile of the present situation, a social profile of the projected characteristics of the area with the construction of the Days Creek Dam, an examination of significant effects, a summary of the effect categories, and conclusions and implications.

## Chapter II

### A CULTURAL HISTORY OF THE SOUTH UMPQUA

#### Introduction

While the Umpqua River Basin has successfully supported aboriginal and European population bases, it has subjected its inhabitants to a certain degree of isolation through the periods of their occupancy and cultural history. Like other regions of the western United States, the basin has held an attractiveness in terms of its resources base and exploitation potential. Yet it seems to be fundamentally different from such areas as the Willamette Valley because it did not constitute a major attraction for initial permanent settlement. Instead, it received people who were latecomers to the more desirable adjacent regions.

This chapter concerns itself with depicting the aboriginal and European settlement of the central portion of the South Umpqua. Emphasis is placed upon people's interactions with the environment and their technological progress through time. The aboriginal period has not received significant attention and cannot be described in a complete manner. The European period possesses a great deal more references but it, too, requires substantially more work by historians.

## The Aboriginal Period

### Early Prehistory

The human occupation of the South Umpqua River Basin may extend into the past some 10,000 years or longer. Artifacts from personal and private collections suggest a substantial antiquity. A great deal more work in surveys, excavations and analysis must be accomplished before a solid chronology can be developed.

It is suggested that the Umpqua has been the place of migration for many successive small waves of native people since the earliest times of human occupation in the Cascade Orientale. For the coastal dwelling Penutians and Sahaptins and their predecessors, the area probably constituted an escape or refuge zone from the increasingly crowded Willamette Valley. They came in small numbers and centered on the northern periphery of the Umpqua. For the plateau dwellers and later Columbia plateau migrants, the Umpqua probably represented a route to better settlement areas and, when more movement was denied, became a place of permanent settlement. Groups like the Athapascans, who probably came in from the east around 1000 A.D., pushed through the Umpqua and settled widely over Southwestern Oregon and Northwestern California. In all likelihood they interspersed between strong groups in their way and displaced weaker ones. The latest of them took up residence in the South Umpqua proper.

The distribution of tribes in the period of late prehistory and early history illuminates the mix of groups and languages through time.

## Late Prehistory

Functioning as a refuge and spill-over zone for the Willamette River Basin and as a migration route to the coast, the region came to the curious mix and confusion of peoples reflected in the ethnographic literature. The occupation and distribution of prehistoric and historic aboriginal populations of the Umpqua River Basin, as well as many contiguous areas, defies an orderly classification. Aboriginal groups along the coastal zones are better understood historically than are the inland groups. Those inland are quite distorted in an ethnographic sense. The Siuslawan groups, such as the Lower Umpqua who resided on the coast of the Umpqua Basin to as far inland as Mapleton and Scottsburg, have been fairly well documented, at least linguistically. Some early ethnologists were able to interview a few remnants of the Lower Umpqua when they were confined to reservation life (cf. Fratchenburg 1911). Although the language and the culture was becoming extinct, some information was salvaged. Other inland populations of the area are very poorly reported and little is known about them.

The uncertainty and mystery behind inland groups of the Umpqua River Basin are attributed to several factors. Very little work has been conducted that looks into the historic population migrations. Information that has been collected at very early dates by Euro-American travelers and traders concerning aboriginal culture has a tendency to be biased and of questionable accuracy. By post-European contact times, trained observers had difficulty in collecting data since most of the aboriginal populations were extinct or becoming so, and little information could be

pieced together. (An example would be the Rogue River Indian Wars in the 1850's which annihilated and dispersed many of the aboriginal groups. Survivors were thrown together on reservations as conglomerates.) Very little archaeology has been accomplished in the 4,560 square miles of drainage to reinforce, supplement or reject data that was previously collected or documented.

#### Historical Tribal Distributions and Diversity

The prehistoric and historic aboriginal occupation of the Umpqua River Basin is not understood within any definite chronology. It has been marked by Athapascans, Takelma (an isolate), several coastal linguistic families, as well as by Kalapuyans and Sahaptans. All have occupied, either permanently or seasonally, some portion of the river basin. Some are a modern phenomenon in terms of length of residence; some represent a rather long duration of occupancy. Construction of an orderly taxonomic scheme of these groups is at present quite impossible. Since the emphasis here is placed upon the Upper Umpqua, it would ordinarily be necessary to give a brief overview of groups occupying contiguous areas who may have impacted upon the Upper Umpqua in some way or who the Upper Umpqua may have affected through economics, intermarriage, warfare or enculturation and assimilation relationships. However, this would be beyond the actual scope of the research (See Appendix B for a brief description of the tribal groups). Those tribal entities primarily occupying the Rogue and/or Illinois drainages were the Takelma, Chastacosta, Tututni, Chetco, Dakubetede and Taltashtuntude. Other groups,

such as the Molala, were later migrants to the Umpqua Basin. To the north, Yoncallas (primarily Southern Willamette Valley dwellers) occupied portions of the basin on at least a seasonal basis. Along the coastal plain were the Kuitish or Lower Umpquas.

Other groups who may have inhabited the Umpqua Basin or adjacent areas are very little known. Some of these groups, such as the Nahankhoutane, were reported to have occupied the area near and around the upper portions of Cow Creek (cf. U.S. Government 1907). The Nahankhoutane have not been described or recorded in any helpful way and their actual relationship, as well as their presence, is more of a mystery than other Athapascan groups already mentioned. It is possible that this group, as well as others, were simply bands or offshoots from larger tribal entities.

This entire southwestern area of Oregon, for the most part, seems to represent many unknowns in terms of the time and spatial fit of the aboriginal occupants. Many of the groups seem practically marginal, scattered and out-of-place because little is known or can be reconstructed of their history and culture. The Upper Umpquas are no exception. At present the cultural position of this group in the Umpqua Basin cannot be explained adequately. Brief encounters by early explorers and travelers have alluded to them; informants from neighboring groups have acknowledged that they did exist. At best, they represent an enigma in terms of their culture and history. What follows is an attempt at reconstructing their cultural position at the time of white control.

### The Position of the Upper Umpqua

Early travelers and explorers of the Umpqua River Basin, such as Hale, noted and recorded the presence of a group of native Americans whom they called the Upper Umpqua or simply Umpquas. Nothing was ever recorded other than that they did exist and occupied a certain locale. It is generally thought correct that this locale is the portion of territory from Scottsburg on the west to the upper regions of the basin and east into the Cascade Mountain Range. Their northern boundary apparently did not exceed the Kalapuya and Elk Creek Drainages. Their southern limit was somewhere near the upper reaches of Cow Creek (Berreman 1937: 30). It should be noted that a western boundary of Scottsburg may in fact be too far toward the coast. Scottsburg represents a point beyond the beginnings of a different habitat and different cultural requirements.

Most accounts of the Umpqua note a very distinct Athapascan dialect, a dialect that differed immensely from neighboring Athapascan groups. Jacobs suggested that the dialect may be archaic and therefore represents, with other phenomena, a longevity of residence (Jacobs 1937: 59-60). It should be stressed that dialectical differences in terms of archaic form do not constitute a single reason for longevity. Swanton mentions that there may have been several bands of sub-divisions to the main tribal body. The Nahankhoutane or Cow Creek may represent one such group (cf. Swanton 1968). Their exact position in relationship to the lowland Takelma cannot be ascertained.

Population estimates are for the most part non-existent. Swanton cites Hale as estimating there were approximately 400 Umpquas in the area

by 1846 (Swanton 1968:78). Assuming that some type of rapid population declination took place prior to Hale's initial contact, then a likely explanation is a disease that reached epidemic or near epidemic proportions (cf. U.S. Government 1907:866).

The Handbook of North American Indians mentions that the Upper Umpqua mainly derived their subsistence from the rivers. It further mentions that all Athapascan groups in southwestern Oregon were once considered divisions of the Umpqua (cf. U.S. Government 1907). Both points are interesting in terms of the haphazard ethnology. The former states that subsistence emphasis was on the river, but does not consider the fact that a rich supplemental base also existed in terms of terrestrial flora and fauna. The latter is taken without any evidence leading to this type of event. There may have been divergent bands similar as reported with the Tututni. This, too, cannot be fully documented.

Leslie Spier noted that the knowledge of the tribal distribution in southwestern Oregon is very chaotic and the literature accounts very weak in content (Spier 1927:358). Even though he has noted distinct linguistic grouping, the literature accounts, coupled with such occurrences as the Rogue River Indian Wars, have created a circumstance whereby groups such as the Upper Umpqua were thrown out of any cultural perspective.

#### Reconstruction of the Upper Umpqua Arrival

It is generally agreed that Athapascan groups, such as the Upper Umpqua, moved from Northern Canada south to what is now the continental

United States. The precise time of this movement and the routes that were chosen are not known. Edward Sapir suggests that the Great Basin was the most probable route for the groups that traveled into the southwest and became known as Navaho and Apache. While the Great Basin was most likely, Sapir notes that it does not imply a direct line of movement (Sapir 1936:235). These groups are thought to have been established in the Southwest by 1300 to 1500 A.D. (cf. Sapir 1936). This, however, alludes to Athapascan movement into the Northwest, and in particular to Oregon. Kroeber notes that the Pacific Coast Athapascans are immigrants from a remote period and hints at a solid population movement (cf. Kroeber 1925). This could be the case in part but a supplementary hypothesis seems to be needed.

Melville Jacobs' alternative or supplementary hypothesis is that these Athapascan migrants could have possibly selected the Columbia River Basin and Plateau as a route to the Pacific Coast even though the Great Basin could have been a primary thoroughfare (Jacobs 1937:67). If this is correct, then it might suggest Athapascan involvements in Oregon as early as 1000 A.D. or before. If, for example, migration did follow major river and/or mountain routes from the north, then, once established on the lower Columbia, the Cascade Divide would have provided easy access to southwestern Oregon. Rivers, streams and natural ecological area divisions should have allowed for rapid expansion into settlement zones. One would then expect the population flow to move from the hinterland downstream. Jacobs notes that Athapascan settlements are never found at the mouth of a stream without being found inland on the same river but

where settlements are found inland on a river system, they may not be found at its mouth (Jacobs 1937:63). In an expanded sense, this has two possible interpretations: 1) it is more than likely that Athapascan migrations juxtaposed riverine systems, with emphasis on movement downstream; and 2) as movements occurred downstream on these river systems, in some cases as they neared the coastal zones, there were well established enclaves that effectively resisted encroachments.

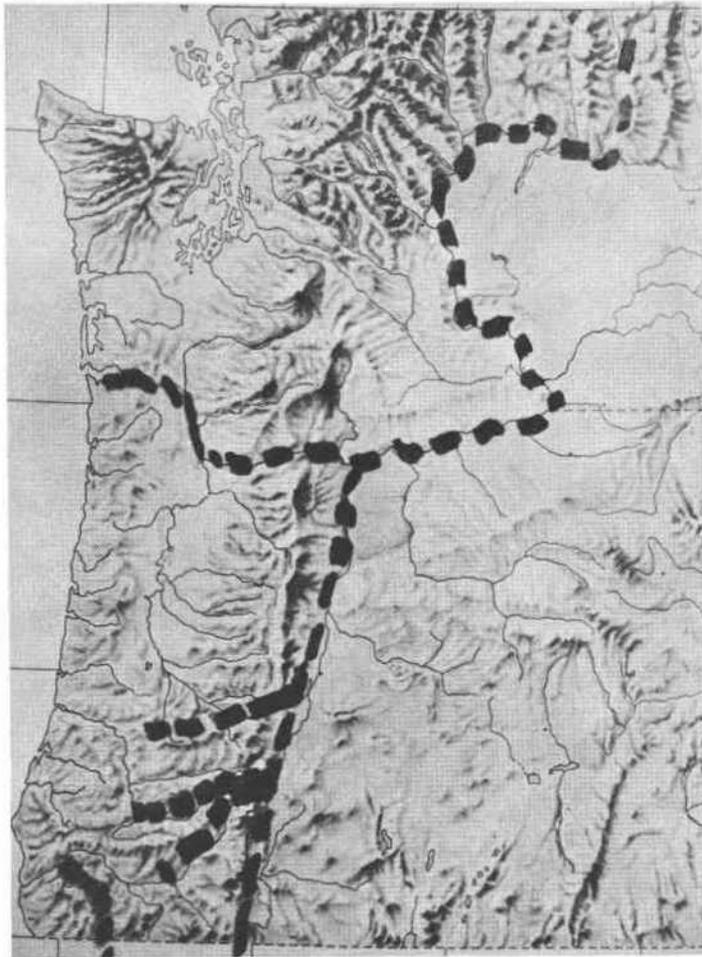


FIGURE 4. HYPOTHETICAL ATHAPASCAN MIGRATION ROUTES INTO OREGON AND NORTHERN CALIFORNIA

Swedish suggests that Oregon may have been an ancient center for Penutians (Swedish 1956:41). Oregon coastal groups of this language phylum are the Coos-Alsea-Siuslaw which would have effectively resisted Athapascan intrusion and kept them inland in the Umpqua River Basin. It seems likely that groups well established in a region with a rich resource base would constitute a formidable barrier. Areas where these people established settlements on the coast as well as inland may have been regions of thin population densities; e.g. the Rogue Basin. This, however, is only a matter of speculation.

In essence, the Upper Umpqua and general Athapascan phenomena of Oregon remain a mystery. The prehistory and historic position of these peoples cannot be documented or even speculated without a wide margin for error. Only renewed archaeological, linguistic and cultural reconstruction efforts hope to attain some of the answers.<sup>4</sup>

#### The Contemporary Upper Umpqua Position

At present there are approximately 56 individuals in the Upper Umpqua Valley who claim descendancy from the Athapascans who once occupied this area. The region in and around Tillier, Oregon, holds a vast warehouse of information that can only be obtained through archaeological efforts (cf. Newman and Scheens 1966). Forest Service personnel at Tillier Ranger Station have located and mapped sites that

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4. The authors have proposed such work for funding.

have been virtually untouched, except for a few which were vandalized. These investigations seem urgently needed and the Tiller sites may prove strategic in terms of defining the cultural position of the Upper Umpqua as well as other Athapascan groups in southwestern Oregon. Other work, in folklore, linguistics and ethnology, can serve to further establish a claim or disclaim of historical connection.

### Early White Explorations and Settlement

With the beginnings of Euro-American infiltration into the Umpqua River Basin, aboriginal cultures were exposed to and underwent significant degrees of change. In many cases, these vanguards of exploration directly contributed to the extermination of once established aboriginal populations. Once the avenue was opened for the more permanent white settlement, stresses also emerged on many of the natural resources harbored in the ecological system and thereby established a serious competition for resources that ultimately meant the elimination of Indian culture in the area.

#### The Trapper and Trader Era

The impact generated by the early trappers and traders of this region cannot be underestimated. Many regions such as the Umpqua attracted at very early dates these individuals who were reaping the bounty of the land. Once the Columbia region had opened, it provided a natural gateway into the Willamette corridor and subsequently to the Umpqua and Rogue valleys. The Willamette River most likely provided easy access routes to many points south of its fertile valley. Areas such as the

Umpqua are not as well-documented historically as is the Willamette. It can be assumed, however, that individuals involved in the historical connection of both areas contributed a large amount of cartographic knowledge to be used by the subsequent and more permanent settlers.

Many of the individuals who explored at these early dates only alluded to their impressions of the area. Alexander Ross, for example, who accompanied an expedition for the Pacific Fur Company in 1811-1812, noted simply that some of the finest hunting and trapping grounds were toward the Umpqua. He said that such items as the beaver were very abundant in the area (Ross 1849:231). In 1826, Hudson Bay Company began dispatching their expeditions to the Umpqua not only to exploit this fur resource, but also to establish trade relations with the Indians (Winther 1950:69).

In the 1830's, the Hudson Bay Company began to show a great deal of interest in the potential of the Umpqua. In the years 1826-1827, A. R. McLeod led a hunting expedition into this region for the purpose of surveying the trapping potential that actually existed (Odgen 1961:176-177). McLeod's force was a portion of Peter Skene Odgen's main Snake River Expeditionary Team which in that same year was camped at Fort Vancouver. McLeod noted that from the Willamette Valley they followed "well-worn trails" that led directly to the coastal regions of the Umpqua (cf. Odgen 1961). More than likely these were established trade routes used by aboriginals. McLeod entered the region on the Umpqua River approximately 30 miles upstream from the mouth. From here, a few members moved upstream and emerged near Lookingglass in a central portion

of the valley (Odgen 1961:199n). By 1836 the Hudson's Bay Company had established the coastal Fort Umpqua in order to continue trade and trapping operations. The fort was located in close proximity to the 1920-21 structure constructed by employees of the Northwest Company (cf. Scott 1923).

For the most part, existing accounts are not accurate concerning the primary impacts of the early explorers upon the Umpqua River Basin. It is not clear to what extent or really how extensively they exploited the region. Much better accounts exist for the Willamette Valley. What is known, however, is that trapper-trader actions directly contributed to the oncoming settlement of the region--a settlement that would be more permanently directed toward the land and other existing resources.

#### Early White Settlement

The first Euro-American settlement in the Umpqua was established by Hudson's Bay Company. From as early as the 1830's, the Umpqua's were being exposed to various individuals and groups who traveled and charted various parts of the region. One such person was Ewing Young who passed through from California on his way to the Willamette Valley (Bright 1950: 112). In 1843, Johnson and Winter noted the diversity of the Umpqua with respect to the woodlands and prairies. They made specific mention of the quality of the soil and water (Johnson and Winter 1906:168). Still, Hudson's Bay Company remained the only settlement in the valley near the coast. Johnson and Winter felt that the valley, in general, lended itself to the rapid inducement for settlement, largely because of the

relative ease of access from the Willamette side (Johnson and Winter 1906:169).

By 1846, what was then considered to be the prime land in Oregon Territory, the Willamette Valley, was already claimed. From this time on, areas such as the Umpqua began receiving overflows (Winther 1950:111). As if to expedite the settlement of such places as the Umpqua, Jesse Applegate and Levi Scott began in 1846 to explore the possibilities of a southern route from the Willamette to California, a road which by 1850 would allow for the ultimate settlement of southern Oregon (cf. Winther 1950).

One of the first permanent settlers to the Umpqua Valley was Levi Scott, who in 1848 established what is now the town of Scottsburg, located on the main stem of the Umpqua River. His plan, in part, was to locate a strategic point which would compete with areas such as Portland in acting as a supply depot for the mining districts in southern Oregon and in California which had experienced great population influxes during that same year (Bright 1950:113-114). By 1850 an organization was formed known as Winchester, Payne and Company. It held the objective of moving inland to locate other suitable town sites to act as trade nuclei. Scott and other Oregonians joined this effort and later formed the Umpqua Company. This expansion brought about the town of Elkton and the purchase of a ferry on the North Umpqua River. The ferry site emerged as the town of Winchester and became the county seat in 1852 (Bright 1950:122). Scottsburg's location for trade with the upper and the more southern portions of the region proved a successful endeavor until the mining

began to decline in the late 1850's. Along with it, many similar towns began to decline in importance.

Settlement seemed to occur at a rapid rate in the central portion of the Umpqua Valley during the 1850's. Some felt that the gold rush marked the beginnings for life in southern Oregon (cf. Herman 1918). This is doubtless true to some extent, but the primary impetus seems to be related to the attraction of initial land claims in a region that could offer opportunities more diverse in nature than the previously claimed Willamette. Although not as suitable for agriculture as the Willamette, the Umpqua was heavily forested. Jesse Applegate noted that the soil was rich and productive. The main valley was not the same as in the western sense of the word--it seemed more cataclysmic, but the climate was more favorable than that of its Atlantic counterpart (Applegate 1931:135-136). The grasslands afforded excellent grazing opportunities and most varieties of livestock did extremely well. Those individuals already settled there were neither discontented nor desiring to leave (Applegate 1931:138-144).

#### Expansion of White Settlement in the Central Valley

Whatever was the contributing factor or factors to the settlement of the Umpqua Valley (and there were many), by 1851 townsites began emerging within the central portion. Many conditions of the region began showing signs of marked change by 1851. People began filtering in from the Willamette Valley and other portions of the territory. Many came directly from points east. These individuals are credited with the

primary growth and settlement of towns that still exist in the Umpqua. By 1852 there was a sufficient population base to warrant the creation of a county government, i.e., Douglas County. Its boundary configuration consisted, in part, of seceded lands from the north which were once part of Lane County. Initially, there were two county divisions in the Umpqua River Basin, Douglas and Umpqua counties. By 1862, Douglas County had absorbed all lands that were previously designated to the Umpqua (Walling 1884:406).

#### Roseburg

In 1851 Arron Rose settled his donation land claim at the confluence of Deer Creek and the South Umpqua River. Although Rose realized the agricultural potential of this area, his main enterprise was that of merchandising. He successfully sold and traded merchandise to those who passed through this area or who began settling in the vicinity. His success seems due, in part, from the abundant traffic that the region as a whole was now experiencing (Walling 1884:409).

In one year Rose's settlement began to experience a rapid influx of settlers and by 1854 it had become the county seat of Douglas County, replacing Winchester (MacArthur 1965:521). The settlement had been originally called Deer Creek. In 1855, it became known as Roseburg after its founder. Its geographic location was more strategic than Rose had ever imagined. At the onset of the Rogue River Indian Wars, Roseburg became a central military staging point.

As Roseburg was growing so was Winchester, but by 1859 Roseburg had been successful in absorbing Winchester's once thriving enterprises and

ambitious citizens (Walling 1884:411). Through the combination of roadways, railroads and the beginnings of a rewarding agricultural base, Roseburg had become the center of commerce for Douglas County and the Umpqua River Basin by 1870. A two-way trade to the outer world was now becoming possible because of an accumulated surplus and transportational access (Winther 1950:183). Roseburg incorporated in 1872 and Winchester became a second-place town of the county.

#### Winston

The history of this town is rather obscure in relation to other areas of the central valley. MacArthur notes that a post office was established here in 1893 and the town was subsequently named after the first postmaster (MacArthur 1965). Winston may very well have been a location on the stage line routes.

#### Dillard

What is now the town of Dillard was settled in 1852 by John Dillard (MacArthur 1965:186). Apparently its population never reached any significant level or proportion. For the most part, the area was settled for its agricultural potential. Today it is mostly supported by lumbering operations.

#### Myrtle Creek

First settled by James Weaver in 1851, Myrtle Creek was named for the vast myrtle groves indigenous to the area. Although this land claim was sold on several occasions, in 1865 a small town began to emerge (Walling 1884:422). At an early date it was realized that a lumber as well as an agricultural potential existed, but land was not available in

extensive quantities. MacArthur mentions that in the late 1860's a movement was underway to divide Douglas County into two portions with Myrtle Creek aspiring to county seat of the southern county. This division, however, was never accomplished (MacArthur 1943:305).

#### Riddle

The first settlements in the Cow Creek region were in 1851. This area did not develop beyond homestead status until near 1882, when the Oregon and California Railroad had expanded its operation south of Roseburg and established a depot at Riddle (MacArthur 1965:511). This provided a stimulus for only a small amount of growth.

#### Canyonville

Canyonville is situated on the north end of a small valley that opens up into the South Umpqua. Jackson Reynolds claimed this land in 1852 and some six years later a town began. Canyonville was a strategic point on the Oregon and California Stage Line, but was bypassed by the railroad in later years (MacArthur 1925:326). The soil in this area has held good agricultural promise, especially in the bottom land alluvials east of Canyonville. Most types of grasses and goods can be successfully grown. By the 1870's Canyonville had several grist mills and a sawmill which added to its economy.

#### Days Creek

This community was settled by Patrick and George Day who established a homesite near the confluence of Days Creek and the South Umpqua River in 1851. Apparently lumbering has always been a chief activity of the region (cf. Walling 1884).

## Tiller

Named for its first settler, Aaron Tiller, the community has chiefly become a U.S. Forest Service Station and logging service area.

## Transportation

As previously noted, the "Old South Road" had inspired access from the Willamette Valley into areas such as the Umpqua and Rogue River Basins. As early as 1843, settlers had realized the hardships and handicaps associated with frontier isolation throughout the Oregon Territory (cf. Burcham 1946). The Umpqua Valley had been relieved of a portion of its natural isolation by 1851 when the Scott and Applegate survey from the Willamette Valley to California became a reality. Eventually this road would practically become a thoroughfare (Burcham 1946:422-423). In 1853, money was appropriated for road work from the Rogue Valley to Myrtle Creek. Although the gold rush in southern Oregon and in California eventually claimed most of the road crews, a route linking the southernmost portion of the state with Roseburg finally was completed in 1858 (Jackson 1949:21). Roads were eventually completed from Roseburg to other portions of the valley, such as to Coos Bay, by 1869.

## River Transport

Interest in the Umpqua as a navigable waterway was generated by Levi Scott in 1848. At this time the river traffic had become a reality and trade began between inland and coastal cities. Although in some areas the relationship had begun at an earlier date, this really marked development for the Oregon Territory, especially from points on the Columbia

River. By 1851, the Willamette experienced a major impetus in steamboating, not only with nearby coastal and inland sites, but also through ocean transport with locations such as San Francisco. As items for trade began developing in surplus, the use of rivers to carry supplies increased at a rapid rate. The effort to search for navigable waterways continued. In 1853 all areas of the Northwest experienced an impetus in steam and sail craft transport (Wright 1961:432).

Even though the Umpqua never experienced as lucrative a trade as the Willamette, the river trafficking nevertheless played a significant role in the Umpqua's economy. From the coast to Scottsburg was the primary zone of navigation on the Umpqua River. Several individuals attempted flatboats and steamboats as far up its course as Roseburg, but this was soon deemed infeasible (cf. Walling 1884). The Umpqua Valley's growing trade relations induced the establishment of a regular service by a San Francisco based firm to inland Scottsburg in 1853. The schooner Umpqua, the first to be built south of the Columbia, engaged in coastal trade from Scottsburg in 1856 (Wright 1961:59). Scottsburg remained the central point of trade on the Umpqua River until the decline of river traffic. Surveys had revealed it was not practical to areas such as Roseburg because of the high cost associated with necessary channel improvements.

In 1870 the Umpqua Navigation Company commissioned a steamer for the purpose of attempting the navigation feat to Roseburg. Some three weeks later, and with the aid of lines, cables and donkey engines, the mission had been completed. The company received \$70,000 in the form of a

governmental subsidy for its accomplishment, but never returned to Roseburg (Wright 1961:185). The steamboat, The Swan, did remain on the Lower Umpqua River for several more years. Later in 1870, the Merchants and Farmers Navigation Company completed a steamship in an attempt to establish a regular service between Gardiner and Canyonville. The attempt did not pass Sawyers Rapids, which is located some ten miles above Scottsburg (Bright 1950:120) and the plan was abandoned.

It is not an understatement to suggest that areas such as Roseburg were relying quite heavily upon the use of the river for commerce activities. If river improvement would have been made, some suggest that the Umpqua River would have proved a more productive area than even the Willamette Valley (cf. Walling 1884). This may or may not have been the case. The fact is that Roseburg never realized this potential, at least not during the era of the river boating. Eventually the railroad would alleviate the problem of shipping to and from central Douglas County. A line from Roseburg to Coos Bay would displace any real necessity to improve the navigation potential of the Umpqua River.

#### Railroads

Although there had been some road systems available to the Umpqua Valley residents prior to the advent of the railroad, they did not serve in as efficient a manner as the river trafficking or railroading. In 1872 Roseburg became the southern terminus of the Oregon and California Railroad (Walling, 1884:381). The line ran some 200 miles from Portland and came to be of vital importance to the central valley. Roseburg remained the terminus and a central dispatching point for some ten years

after the completion of the line. Eighteen eighty-two marked the expansion of the Oregon and California to join with the Central Pacific. The Central Pacific then began construction in a northerly direction from California and the Oregon and California pushed south from Roseburg. This expansion connected points in the Pacific Northwest with the national markets system. As a result, industrial growth found a stimulus in the central valley.

#### Development of Resource Exploitation to Accompany Industrial Growth

The growth of the Umpqua River Basin, especially its central portion, can be viewed as a rather consistent, but slow marketing and commercial development from the period of its first white settlement (cf. Walling 1884). The real stimulus for growth was provided by the coming of the railway enterprise in 1872. While abundant in a natural resource base, this region seemed to lag behind such areas as the Willamette Valley in terms of breaking down the barriers of frontier isolation and receiving technological impetus. This was due primarily to geographical differences and the pattern of settlement. The Willamette Valley, considered to be the choicest of lands for early settlement, was mostly claimed by the 1840's. The Umpqua, then, acted as a domain to harbor the overflow and excess. It's growth was sporadic-lagging behind the adjacent Willamette. The Umpqua River Basin had neither fully navigable waterways nor was it as ideally suited for the roadbuilding and railroad as was the Willamette. The primary attraction seemed to be its abundant and presumably inexhaustible resource potential.

## Mineral Exploitation

The gold rush of the late 1850's spread a fever throughout many regions in the Pacific Northwest and the Umpqua Basin proved to be no exception. One of the most prominent mineral bearing areas of this region is the Bohemia District located in the Calapooyia Mountain Range to the north of Roseburg, partially in Lane County. In 1867, there were discovered vast amounts of gold and silver bearing ores in this area, but due to the geographical confines of the district, adequate routes of travel to and from the mine were not opened until 1871 (Walling 1884:392). These mines eventually proved very difficult to work and operate on a sustained basis. From time to time mining activities were all but abandoned because of the relative inaccessibility of the area and the resultant high transportation costs. By 1884 the Bohemia District was barely operating (cf. Walling 1884). Birch suggests that the area was neglected until 1891 when development on a large scale actually began (Birch 1942:109). By 1902 some 2,000 claims in this district were recorded but, for the most part, it was marked by a sporadic amount of ore excavation.

The central portion of the Umpqua Basin contains various amounts of mineral wealth from the steamboat area on the North Umpqua River to the better defined placer mining of Cow Creek and the South Umpqua. Quicksilver and coal deposits have also been mined to varying degrees throughout the basin. The quicksilver deposits for the most part are located on the southwest corner of the county and to some extent in the Calapooyia Mountain Range on the northern edge of the basin.

## The Forest and Agricultural Resource

The forest resource was the most obvious resource in Douglas County in the 1800's and is still today the chief economic base of this region. In the 1870's various sawmill operations began throughout the central portion of the Umpqua Basin. At this time there were two small mills on the North Umpqua River and several on the South Umpqua from Days Creek downstream to Roseburg (cf. Walling 1884). Timber-related products are important to the Umpqua economy and continued in importance throughout the historical period.

As subsequently described in the ecology overview, the Umpqua Basin is characterized by various small valleys with fertile soil conditions. These conditions allow for an excellent variety of grasses for grazing animals. The sheep industry, for example, produced some of the most desired wool and meat products in the Northwest by the 1880's. Cattle were never very prominent, but many of the earliest settlers began in this enterprise only to abandon it later for various forms of grains. As production figures indicate, it is still important.

The Umpqua Valley also produced forms of fruits in abundance. Apples, pears, prunes and peaches were very successful crops, and are only exceeded today by those grown in the Rogue River Basin. At one time the produce from Douglas County was in great demand at many of the larger market centers such as Portland (Walling 1884:396). In 1930 the total harvest of prunes experienced a decline of about one-fourth of the previous harvest figures. This was due, in part, to a reduction in market prices. Although still in a reduced state from earlier 20th Century

production figures, prunes and other forms of tree fruits are still in demand by the national marketing system--a demand that will hopefully be met because of recent<sup>s</sup> acreage increases (Douglas County Planning Commission 1968:36). For the most part the Umpqua River Basin was late in developing its resource base for exploitation at a major level of significance. The region's isolation and lack of adequate transportation facilities contributed substantially to this delay.

### Summary

The occupation and distribution of the aboriginal populations of the Umpqua River Basin, especially the hinterland, is not well documented in the existing literature. The general cultural evolution of Indians, their resource exploitation, settlement patterns and antiquity are for the most part, a matter of speculation. Presently some 50 individuals in the area claim descendancy from the indigenous Athapascan groups.

The Euro-American cultural sequences can be somewhat better accounted for in terms of historical impacts and involvements. The fur traders and trappers who came to this region in the early 1800's contributed in a direct manner to later settlement by affording written accounts and cartographic description. Like many other river drainage systems, the Umpqua River system offered a host of natural resources for exploitation. One marked difference, however, was the seeming isolation that persisted until the late 1800's.

Although the basin was considered rich in its resource base and in its potential, it did not receive a real impetus for socio-economic

development until the establishment of the railroad to Roseburg and adjacent areas. Development of the Umpqua has lagged behind the Willamette River Basin. Change has been less startling to its people and traditions of the past are integral to the present cultural situation.

This region has revealed some fundamental differences from areas such as the Willamette. Throughout most of its aboriginal and Euro-American cultural history, the central portion of the Umpqua has seemed to have been the recipient of the overflow or excess from other desirable areas of settlement. Although the basin did experience a rapid influx of settlers during the 1850's, these individuals were primarily those who had migrated to seek more desirable lands for settlement, only to find them already claimed.

### Chapter III

#### THE HUMAN ECOLOGY OF THE SOUTH UMPQUA RIVER BASIN

Our major descriptive concern in this chapter is the relationship between the physical and biological aspects of the environment and the human activities that have developed upon the resource base in the South Umpqua River Basin. The purpose of this description is to provide the reader with a perception of some of the balances and imbalances that presently prevail within the South Umpqua cultural and environmental interplay so that a more cogent and meaningful assessment of the proposed Days Creek Dam project can be made.

Some unique characteristics of the South Umpqua environment are only discernible when compared with the North Umpqua or considered as a portion of the entire Umpqua River Basin. For this reason the discussion that follows makes major reference to the entire Umpqua Basin and its physical geography. It then turns to some of the unique hydrological characteristics that distinguish the South Umpqua as an entity within the Umpqua River Basin.

From this base the discussion turns to the human activities within the South Umpqua and how these activities accomplish cultural functions vis a vis and within the environment of the South Umpqua. An attempt is made to relate the cultural functions of population viability, livelihood, community, communication and innovation to the South Umpqua's major

resources. Emphasis is placed on the former two insofar as community, communication and innovation are considered separately elsewhere in this report.

#### The Umpqua River Basin: Physical Features, Climate and Resources

The Umpqua River Basin comprises an area of 4,560 square miles in southwestern Oregon. It lies almost entirely in Douglas County, with the major portion situated in an alluvial valley between the Coast and Cascade Ranges. Surrounded by mountain ranges, it is bounded on the north by the Calapooya Mountains, on the south by the Rogue River Range, on the west by the Coast Range and on the east by the Cascade Range.

The Umpqua River is formed at the confluence of the North and South Umpqua rivers. Originating in the high Cascades, the North Umpqua flows approximately 106 miles and drains an area of 1,347 square miles. The South Umpqua, with its headwaters at Castle Rock Creek in the western Cascades, drains an area of 1,762 square miles in its 104 mile length. It meets with the North Umpqua west of Roseburg and forms the Umpqua main stem. The Umpqua, draining an additional 1,451 square miles, flows about 111 miles in a westerly direction before discharging into the Pacific Ocean near Reedsport (State of Oregon 1958).

#### Physical Boundaries and Physiography

The Umpqua Basin is comprised of six major topographic zones, including its major boundary determinants. These are (1) the Coastal Plain, (2) the Coast Range, (3) the Central Valley Lowlands, (4) the Cascade Range, (5) the Calapooya Mountains and (6) the Klamath Mountain



FIGURE 5. MAP OF THE UMPQUA RIVER BASIN

Range (cf. Sidor 1966; State of Oregon 1963). Each zone contributes to the great physiographic diversity of the basin.

The Coastal Plain is contiguous only with the mouth of the Umpqua River at Winchester Bay. Here the plain consists of low beaches, narrow foredune formations, a narrow deflation plain and substantial old back dune formations that encircle the bay at the river's mouth.

The interior region to the east of the coastal plain is made up of the low Coast Range of mountains. These mountains constitute the western edge of the Umpqua drainage system. They reach elevations of nearly 3,000 feet, but few ridge lines actually exceed 2,000 feet. This range of

mountains is made up of sedimentary deposits of shales, sandstones and conglomerates. The ridge lines are dissected by a dendritic pattern of gorges and streams that in their eastern flow form tributaries for the South Umpqua and the Umpqua main stem within the basin (Beaulieu and Hughes 1975).

To the east of the Coast Range is the Central Valley Lowland zone, actually a depression between the Coast Range and the Cascades further to the east. The lowland zone expanse extends down the mainstream of the Umpqua approximately 12 miles, up the North Umpqua about 15 miles and up the South Umpqua to its confluence with Cow Creek. Other valley lands extend through the basin's tributary systems at lower elevation. The average elevation of the lowland is 700 feet and the range in elevation is between 500 and 1,000 feet. The lowland consists of large areas lined with alluvial material of Holocene or Pleistocene age (deposited within the past 2 million years). Basalt and other volcanic outcroppings do occur, especially near the community of Roseburg and in the vicinity of Elkton and Drain (State of Oregon 1973).

The eastern boundary of the basin is formed by the Cascade Mountains. These illustrious geologic structures are primarily composed of volcanic rock formations, with mixtures of tuff, breccia and other materials. The mountains are characterized by substantial geologic warping, faulting and alteration, processes that together with vulcanism date from the late Eocene to late Miocene eras. The Cascades have been carved by stream erosion and their slopes appear very steep and rugged (State of Oregon 1973:2).

The northern boundary of the basin is defined by the Calapooya Mountains. Small in terms of the Cascades, these formations have an elevation of not greater than 2,000 feet. Their significance belies their elevation because they constitute the topographic division between the Umpqua and Willamette River basins. Their southern slopes are drained by tributaries of the North Umpqua and the main stem of the Umpqua River.

The southern boundary of the basin is formed by the Klamath Range that comprises the Northern Siskiyou and the Rogue mountain chains. This series of east-west ridge lines separates the Umpqua from the Rogue River basin to the south and the northern slopes of the ridges are drained by Cow Creek and other smaller tributaries of the South Umpqua. Elevations in the Klamath Ranges reach as high as 6,000 feet and the mountains are composed of granite, metamorphic sediments and volcanic material predating those of the Cascades (Sidor et al. 1966:6; State of Oregon 1958).

#### Climate

The Umpqua River Basin has a temperate maritime climate of moderately warm dry summers and wet mild winters. Variation in precipitation is primarily related to elevation. The coastal slope and mountains seldom experience snowfall except at higher elevations. Rainfall is prevalent with some areas averaging 100 plus inches per year (State of Oregon 1973:3).

The central valley has the widest range of temperatures in the County, with recorded extremes of  $-6^{\circ}\text{F}$ . to  $109^{\circ}\text{F}$ . (Sidor et al. 1966:6). Although differences will occur between elevations, climatic conditions

at Roseburg (elevation 479 feet) are fairly representative of the inland Umpqua Basin. A continuous record has been kept since 1878 (U.S. Government 1956:3). Roseburg's average winter and summer temperatures are 44.6°F. and 65.8°F. respectively, with an average minimum of 33°F in January and an average maximum of 85°F. in July. Average rainfall is about 32 inches, with 60% occurring between November and February. In July and August almost no rainfall occurs. Snowfall is moderate, averaging about six inches annually. The growing season extends from 180 to 200 days, permitting a wide variety of agricultural crops (U.S. Government 1956:3; U.S. Government 1971a:29; State of Oregon 1973:1-3).

In the Cascade area, the rainfall is slightly less than the Coast Range but substantially greater than in the interior valley, averaging about 70 inches per year. Due to the greater elevation, snowfall is more predominant. About 50% of the precipitation above 5,000 feet occurs in the form of snow. At 7,000 feet, 75% of the precipitation is snowfall. Winter snow accumulations are quite large in many parts of the Cascades and they are an important source of summer stream flows (U.S. Government 1971c:9-10). Most of the snowpack melts by early summer and summer stream flows are characteristically low (U.S. Government 1971a:29).

Prevailing winds in the Umpqua basin are generally north and northwest during the summer, changing to south and southwest during winter months. Velocities are moderate and the highest inland recorded velocity was 40 miles per hour at Roseburg (State of Oregon 1973:3).

Water evaporation in the Umpqua River Basin is high during the summer months due to the characteristic climate conditions. Although no

evaporation records are available for the Umpqua basin, it is considered similar to Medford (situated in the Rogue River Basin) because of its proximity. Average annual evaporation for Medford is 43.7 inches with 37% occurring in July and August. Lesser amounts occur in the cooler months of spring and fall and evaporation is negligible in winter. With wide ranges in topography in the Umpqua basin, variations in evaporation are associated with locations and their climatic conditions.

(U.S. Government 1971c:11-12).

#### Other Resources

1. Soils. The existing soil types of the Umpqua Drainage Basin are very diverse. Many have not yet been mapped or named. The nature and distribution of these soils are influenced by factors such as climate, vegetation, parent material, topography (slope)<sup>5</sup> and time (cf. State of Oregon 1969:2). It is our purpose here only to present a general description of soils, their irrigation suitability and to examine in what ways they are best suited to human uses. This general inventory is confined to the primary and secondary impact areas of the designated research setting in the South Umpqua sub-basin.

Soils of the hill and mountain regions of the basin, while well-drained, are suited primarily for forest resource productions. Agricultural pursuits are, in part, limited by the nature of slope requirements. The judgment applies to the Cascades, the Coast Range and the Klamath

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5. Slope is measured on a six-part scale from nearly level to very steep. Irrigation suitability is on a five-part scale from very poor or nonirrigable to excellent (cf. State of Oregon 1969).

mountains, even though their entirety has not been surveyed or mapped. Soils of the Astoria, Trask, Josephine and Boomer series comprise most of the higher mountain regions in this area. These types, in conjunction with rainfall patterns and other influencing factors, provide for an abundant forest product.

Generally, soil types and their distribution have limited agricultural production. The best agricultural soils are found in the central valley or lowland areas along Cow Creek and the South Umpqua River. The areas near Myrtle Creek also have been designated for promising agricultural development (State of Oregon 1969:8). From Days Creek to Jackson Creek in the upper South Umpqua region much of the area is mountainous and comprised of Josephine and Boomer soil types that are ill-suited to agriculture. With the narrow intermountain zones, however, there are soils that are irrigable and suitable for agricultural purposes. These are combinations of the Dole, Newberg, Packard and Camas series. They can be utilized for agricultural produce to include small grains and forage crops. From Days Creek to Canyonville, the Packard O'Shea series predominates, especially in the lower lying areas along the river. This group is well-suited for irrigation and sustains forage and small grains. It is also capable, however, of sustaining other agricultural products, including row crops.

Soil types south and east of Myrtle Creek are also considered suitable for agricultural production. Here are combinations of Ollala, Drain, Anlauf, Yoncalla, Climaz, Camas and Newberg. These soils can

sustain most types of agricultural products, but irrigability is limited, ranging only from fair to good (State of Oregon 1969).

East and north of Winston is a rather large deposit of Chehalis, Drain and St series combinations. Their irrigation potential is rated excellent and they are quite capable of sustaining major and diverse agriculture. In and around the city of Roseburg the irrigation potential of soil deposits is rated primarily as poor to fair largely because of rock outcropping. This does not mean, however, that soil groups here are unable to be cultivated or harvested of some product (State of Oregon 1969).

TABLE 5  
FLOOD HAZARD SOILS

|           |  |              |
|-----------|--|--------------|
| Group I.  | Soils subject to seasonal flooding: <sup>6</sup> |              |
|           | Brenner(Bn)                                      | Gardiner(Ga) |
|           | Camas(Ca)  | Nehalem(Nh)  |
|           | Cloquato(Ct)                                     | Nestucca(Ns) |
|           | Coquille(Cq)                                     | Newberg(Ne)  |
| Group II. | Soils subject to occasional flooding:            |              |
|           | Chehalis(Ch)                                     |              |
|           | Drain(Dr)  |              |
|           | (St)   |              |

Since much of the basin's agricultural endeavors occur on the flood plain of the Umpqua's many tributaries, it is useful to consider soil groups in terms of their frequency of potential flooding as well as the

<sup>6</sup>. Seasonal flooding is defined as being inundated with a frequency ranging from one or more times a year to once in about five years. Occasional flooding refers to a frequency of overflow less frequent than once in five years (cf. State of Oregon 1969:26).

constraints that flooding may place on their productivity. The preceding table represents those soils subject to seasonal or occasional flooding (State of Oregon 1969:27).

In accordance with the above data, the following table (State of Oregon 1969:27) represents the total acreage of these soils that are subject to flooding by sub-basin as well as for the total basin.

TABLE 6  
ACREAGE OF FLOOD HAZARD SOILS BY  
SUB-BASIN IN THOUSANDS OF ACRES

| Flood Hazard Group                | Sub-basin |           |              |              |              | Total Mapped Area |
|-----------------------------------|-----------|-----------|--------------|--------------|--------------|-------------------|
|                                   | Elk Creek | Calapooya | Lower Umpqua | North Umpqua | South Umpqua |                   |
| Group I. Seasonal Flooding.....   | 4.8       | 1.6       | 18.2         | 0.9          | 19.0         | 44.5              |
| Group I. Occasional Flooding..... | 8.0       | 7.5       | 7.3          | 6.9          | 10.4         | 40.1              |
| Total                             | 12.8      | 9.1       | 25.5         | 7.8          | 29.4         | 84.6              |

Thus while the basin possesses very good promise for agricultural growth from the standpoint of soil types, those soils that are most productive or potentially so are also subject to the most frequent flooding, especially from the South Umpqua.

2. Minerals. Mineral deposits in the Umpqua Basin include nickle, mercury, gold, silver, chromite, copper, zinc, coal, sulpher, lead, quick-silver, sand and gravel, stone and pumice. Hanna Nickle Company, the only commercial nickle mining operation in the United States, is located

at Nickle Mountain near Riddle. Copper, lead, zinc and some gold are found in the Green Mountain and Drew Creek districts. Gold, silver, copper and zinc are also found on Silver Peak. Mercury production and quicksilver production east of Sutherlin were once important as mining activities. Chromite deposits are found at Comstock and near the Umpqua River about 17 miles west of Drain. Sulphur occurs at the headwaters of Castle Rock Creek (Sidor et al. 1966:36).

3. Forest Resources. Forest resources are a major part of the Umpqua basin's economy. Nearly 90% of the basin is timbered (Douglas County Planning Commission 1968:19). Below 1,000 feet in elevation along bottom lands and flood banks are hardwood stands of cottonwoods, Oregon ash, bigleaf maple and oak. Also Ponderosa pine and Douglas fir are common to lower zones. The principal forest zone is from 1,000 to 4,000 feet and has the major share of commercial timber. Douglas fir, western hemlock, western red cedar, Ponderosa pine, sugar pine and true firs predominate in the area. The upper slope forest zone from about 4,000 to 6,000 feet is forested primarily with true fir and mountain hemlock. At 6,000 feet and above the subalpine forest has subalpine fir, mountain hemlock, whitebark pine and Alaska yellow cedar stands amidst numerous meadows and barren areas (State of Oregon 1973:13).

4. Fish and Wildlife. A variety of commercially and recreationally important species of fish and wildlife inhabit the area. Anadromous fishery resources include spring and fall chinook salmon, coho salmon, summer and winter steelhead, sea run cutthroat, shad and striped bass. Native and hatchery produced rainbow trout, brown trout and kokanee are

also important game species. Warm water game fish include bullhead, crappie, bluegill and largemouth bass. Other non-game species are also found (U.S. Government 1971a:19).

Black-tailed deer are the most numerous of the big game mammals. Also present are white-tailed deer, Roosevelt elk, bear and cougar. Fourteen species of fur bearing animals are present, including beaver, otter, mink, muskrat, raccoon, skunk, civet cat, weasel, opossum, gray fox, red fox, wildcat, coyote and nutria. Beaver, muskrat, raccoon, civet cat and nutria are the fur bearing animals most often trapped (State of Oregon 1973:22-23).

Upland game birds include pheasants, valley quail and mourning doves in agricultural areas, and ruffed and blue grouse, mountain quail, pigeons and some waterfowl in wooded areas (U.S. Government 1971a:20).

#### South Umpqua Hydrology

It commonly might be thought that two rivers having their origins in the same vicinity of the Cascade Mountains and flowing out of those mountains into and through the same physiographic zone to converge in a mainstem would have major similarities. This is only partially true. Different flow levels, runoff patterns, temperature characteristics, soil permeability and erosion combine to create major hydrological variations between the North and South Umpquas.

Some of the major observed differences derive from the fact that while the South Umpqua drains 400 square miles more than the North Umpqua, its flow is seasonally irregular. During the dry season the North Umpqua's flow is ten to fifteen times as great as the South. Local people

and agencies complain that the South Umpqua becomes polluted; it is unsuitable for recreation, particularly in its lower reaches, while the North Umpqua attracts thousands of recreationists and its waters carry much lower loads of heat, algae and pollution. During the winter wet season the South Umpqua commonly floods and causes a great deal more damage than the North. During the floods of 1964, for example, the South Umpqua inundated 12,040 acres of land in its lower 60 miles while the North Umpqua inundated only 2,000 acres in its lower 60 miles (U.S. Government 1971a:8-9).

Clearly the characteristic hydrology of the South Umpqua is related to physiographic and other factors already described. The settlement of people and the placement of their source of livelihood on the flood plain contributes markedly to actual and relative flooding problems of the river. Settlement on the fertile flood plains has been a more recent matter of real estate sale promotion rather than exploitation of fertile lands for crops. The slower flow of the South Umpqua in its lengthy meandering through the central valley also contributes to problems of pollution and flooding that are not characteristic of the North Umpqua.

The combination of these factors also establishes unique requirements for the adaptation of people who reside in the two sub-basins. The challenges of the South Umpqua are greater not only because of its physical characteristics, but also because greater numbers of people live in its sub-basin.

Ninety-five percent of the South Umpqua's runoff occurs between November and June, leaving a condition of low summer flow to exist between

June and September. Peak flows occur within hours after the passage of a storm front since the topography and geology of the basin are extremely conducive to rapid runoff (U.S. Government 1971a:31). Average runoff of the South Umpqua at the Brockway gauge, measuring 93% of its total area drained, is 2,184,000 acre-feet. Of this amount, 25% originates from areas above 3,000 feet and 10% above 4,000 feet (U.S. Government 1971c:3). For a mean monthly discharge, the South Umpqua averages about 3,014 cfs. (U.S. Government 1971c:Table 8).

Differences in these flow rates are, in part, explained by elevation differences, climate, soil types and vegetation. In comparison with the South Umpqua, the North Umpqua River is more "naturally" regulated. This is in part caused by a stabilizing effect of runoff from Diamond Lake, the retention of later summer snow packs, and pumice soil characteristics which act as reservoirs. Even though clay soils are typical of the entire Umpqua Drainage and are capable of holding as much water as pumice, their retention and release rates are much slower than that of a pumice material and therefore runoff is more severe. This is the case in the South Umpqua particularly.

The widest fluctuating river in the basin is the South Umpqua. In the higher elevations above Tiller it is less subject of fluctuation in runoff rates than in lower elevations of the flood plains. The more forested watersheds are partially capable of better regulation than those of the lower and more agricultural areas. These latter areas contribute to flooding, low flows and sediments. The condition illustrates a

greater need for some form of water management program (cf. Hayes and Herring 1960).

#### Streamflow, Runoff and River Fluctuation

The South Umpqua River flows in a southwesterly, then northerly, direction from the Cascades to the Coast. Its tributaries form a dendritic pattern, draining areas of the western Cascades, Rogue River Range, Klamath Mountain and Coast Range. In the upper reaches of mountainous areas the stream gradient is very steep, causing the South Umpqua and tributaries to drop 400 to 800 feet every mile. Entering the intermountain lowlands, slopes are more moderate and the downward gradient decreases to 10 to 30 feet per mile (U.S. Government 1971c:5).

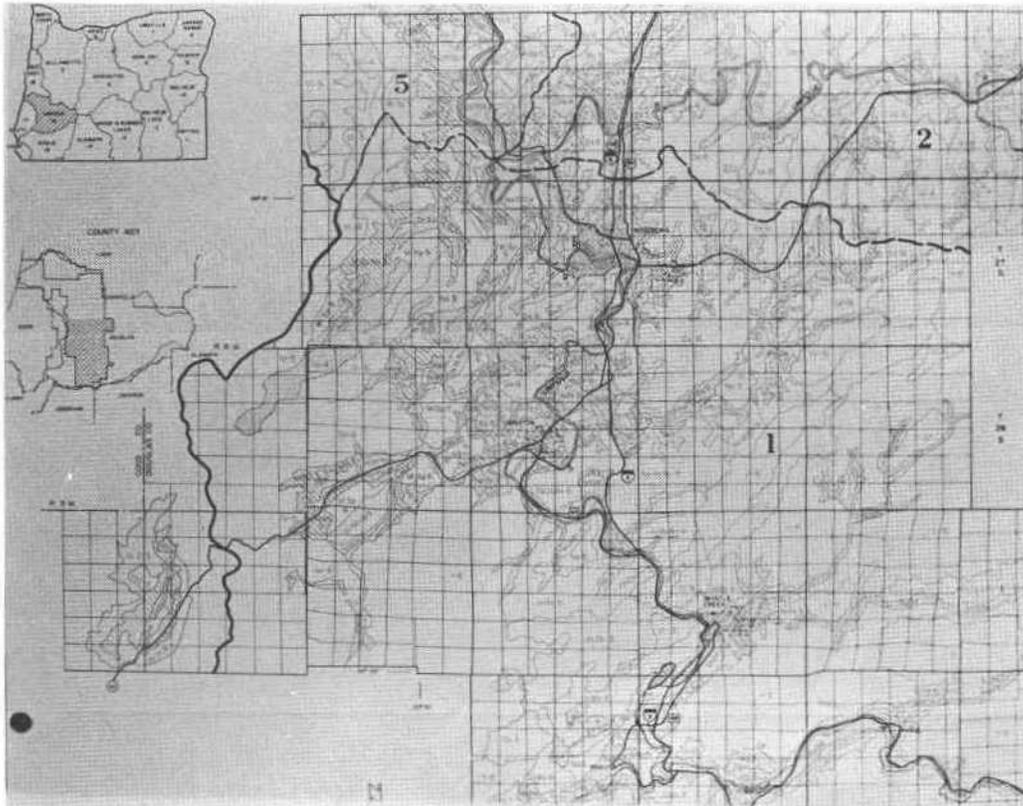


FIGURE 6. THE SOUTH UMPQUA DRAINAGE SYSTEM

The valley section of the South Umpqua basin begins in the lower Cascades. Reaching the intermountain lowlands, the valley section widens out into an area of fertile farmland. It is here that much of the valley is subject to seasonal or occasional flooding during the wet winter months. In summer months the water supplies reach such a low level that they are hardly adequate for some communities' needs. The effects of flooding and low river flow are especially important in the South Umpqua inland basin area. The bulk of agricultural land, as well as 70% of the population of Douglas County, are located in this lower basin (U.S. Government 1971a: 22-25).

#### Flooding

Flooding on the South Umpqua River occurs during the winter months of heavy rains between October and March. Some flooding does occur in fall and early spring. In general, flooding is congruent with major winter storms which last three to five days. Because of rapid runoff, flooding occurs within hours of a storm's passage and causes the river to rise a few feet in a few hours. The characteristic rapid runoff results in high peak discharges causing most floods to last for about four days. On major tributaries such as Cow Creek, the high peak discharges into the South Umpqua, causing considerable backwater to occur. Spring freshets from melting snow cause the South Umpqua to rise for longer periods of time, but peak discharges are lower and the river normally returns to its bank in a shorter period. At the Brockway gauging station between Winston and Dillard, the South Umpqua has flooded 17 times in the past 27 years (U.S. Government 1971a; U.S. Government 1972C:14-16).



FIGURE 7. SOUTH UMPQUA AT FLOOD AND LOW FLOW

Damaging floods from the South Umpqua occur almost every year. Below Tillier floods occur every two or three years, whereas they occur nearly every year between Dillard and Roseburg. Sixty percent of all damages reported occur in the communities of Canyonville, Winston, Dillard, Myrtle Creek, Roseburg and Elkton. Other damage is done to farm lands, roads, bridges and small settlements (U.S. Government 1971a:34-35, 44).

#### Water Temperature

Water temperature on the South Umpqua varies tremendously between summer and winter and is directly related to the differences in water flow between seasons. At Tillier, the mean monthly water temperature from October to May runs from 42°F. to 56°F. From June to September the low river flow causes water temperature to increase to between 60°F. and 69°F. at Tillier and to between 66°F. and 75°F. at Winston (U.S. Government 1971c:23-24).

#### Sedimentation

Sediment concentration on the South Umpqua is not significant except during floods and periods of high water flow. The annual siltation rate is estimated to be about 0.35 acre-foot per square mile of tributary area, slightly higher than the siltation rate of the Willamette River Basin (U.S. Government 1971a:22). It is possible, however, that with increased human usage of the Umpqua watershed, particularly an increase in logging operations or other activities eliminating vegetation, the siltation rate could be higher than what has been estimated in the present.

Thus the South Umpqua River presents unique adaptive challenges to the basin's inhabitants. The proposed Days Creek Dam is one answer to the unique problems posed by the river. The hydrology of the South Umpqua limits the extent to which population growth and economic development can continue to take place in the region. Still, the physical characteristics and resources of the sub-basin show ample prospect for future growth and development.

The river and the basin's resources are not the only key to its subsequent development. The present activities of human beings in the basin and the patterns of their cultural system also provide both opportunities and limitations for future use of the basin. It is to these activities and the extent to which fundamental cultural functions are being met that the discussion now turns.

#### Human Activities in the South Umpqua River Basin

The activities of human beings in the South Umpqua River Basin span many cultures and races, and literally thousands of years of time. The early period of American Indian and white settlement and occupation has been addressed in some detail in Chapter II. Here we offer an overview of contemporary peoples' involvement with the resources of the sub-basin, the population characteristics of the area, the major forms of livelihood sought by the people, the forms and styles of community found in the South Umpqua, the major communication systems and the major technological innovations that have been developed or adopted by the people of the sub-basin.

## The Population and its Physical Well-Being

1. Population. The Douglas County and South Umpqua Region population shows a continued growth pattern and a relatively good condition of health. These two indicators, growth and health, show that the cultural-environmental relationship is one where the physical well-being of the population is being met properly. As previously defined in Chapter I, the fundamental cultural function of population viability<sup>7</sup> also is being achieved.

The population of Douglas County in 1974 was 78,500, representing a density of 15.4 persons per square mile (U.S. Government 1975:E-3). Fully 70% of the county's population resides in the South Umpqua Basin, primarily in the Central Valley lowland zone where larger settlements like Roseburg, Winston and Dillard are located. Nearly 50% of the population resides in a 10-mile radius of the city of Roseburg (U.S. Government 1971b:A-10). The hilly portions of the Coast Range and the Cascades support a relatively slight population in comparison with the Central Valley zone and embrace most of the extractive woods products industry. The valley bases are wood processing, the major agricultural tracts and the urban centers.

Population maintenance or growth is an ecological measure of viability, given the fact that the health and nutrition levels are sufficient and overpopulation is not a characteristic in the area in the first

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7. Population viability is regarded as an essential prelude to other cultural achievements. It means that the population is maintaining itself as a real or potential breeding unit and that its general physical condition is adequate to survival under current environmental conditions.

place. The population of Douglas County and the South Umpqua shows a growth pattern through the entire period of white occupancy.

During the past decade and a half the county's growth has lagged behind the adjacent Willamette Valley and the state as a whole and in relative terms is not overpopulated. Since 1970, however, the county and South Umpqua region have shown an accelerated growth, representing a continuance of the pattern of spillover from the Willamette Basin. The following table shows recent population growth in comparison with the Willamette Valley and Oregon (Bureau of Business and Economic Research 1974):

TABLE 7  
POPULATION GROWTH: DOUGLAS COUNTY,  
WILLAMETTE VALLEY, AND OREGON

|             | <u>Douglas County</u>      | <u>Willamette Valley</u>   | <u>Oregon</u>              |
|-------------|----------------------------|----------------------------|----------------------------|
| <u>Year</u> | <u>Population/% Growth</u> | <u>Population/% Growth</u> | <u>Population/% Growth</u> |
| 1960        | 68,454                     | 1,359,300                  | 1,768,687                  |
| 1970        | 71,743/+4.8                | 1,446,594/+6.4             | 2,091,533/+18.3            |
| 1973        | 76,900/+7.2                | 1,557,430(est)/+7.7        | 2,224,900/+6.4             |

Data on earlier periods show that Douglas County experienced an enormous growth in the 1940's, nearly three times the growth rate for the state as a whole. The following table shows this earlier growth in conjunction with recent trends:

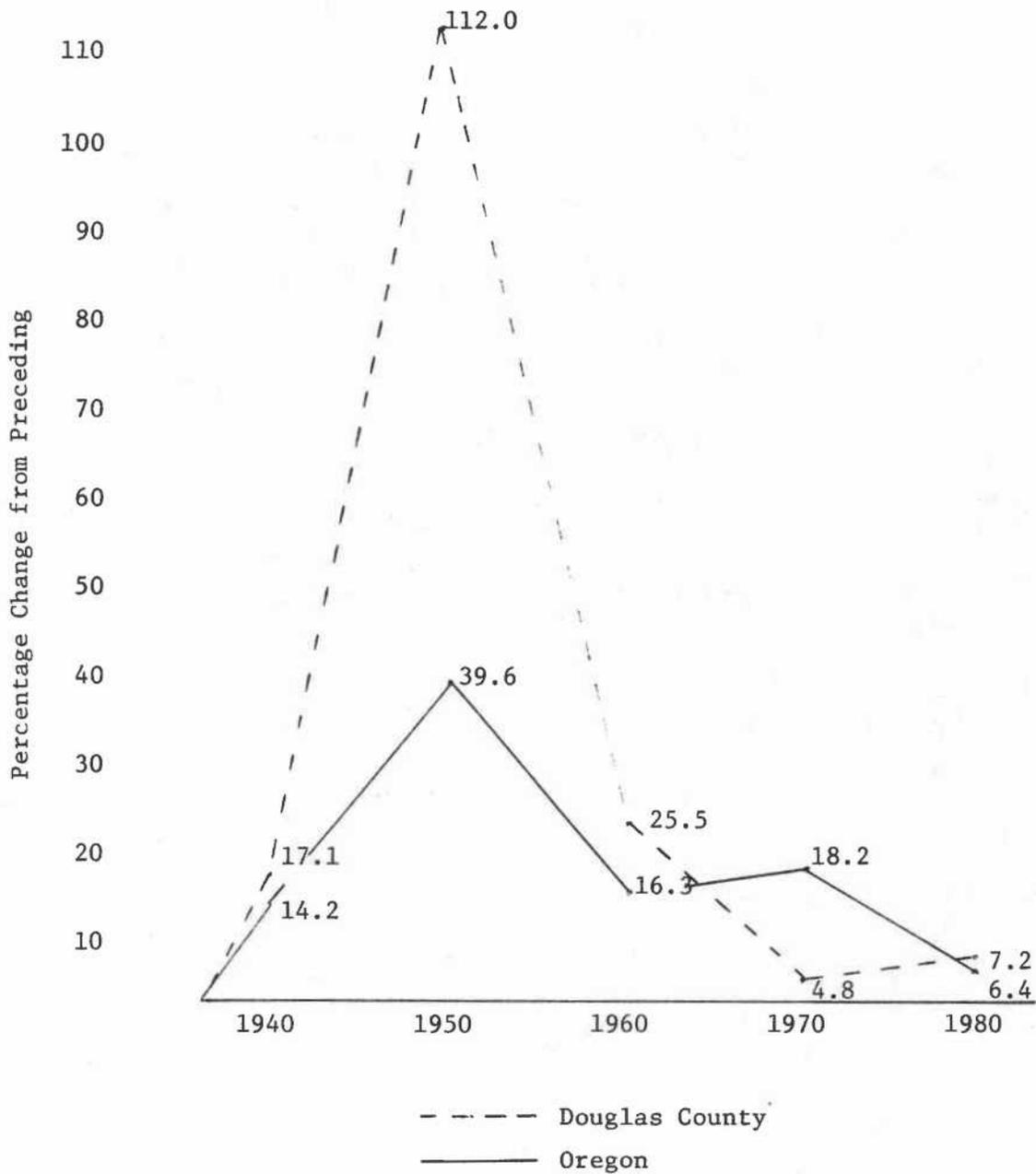


FIGURE 8. POPULATION GROWTH PATTERNS:  
DOUGLAS COUNTY AND OREGON, 1940-1973

Note. Percentage figures indicate change from preceding entry. Sources include: U.S. Bureau of Census, Census of Population: 1970, Vol. 1, Characteristics of Population, Part 39/Oregon, U.S. Govt. 1973; Douglas County, Oregon, Resource Atlas, Extension Community Development Project, Oregon State University, May, 1973; Oregon Economic Statistics, Bureau of Business and Economic Research, University of Oregon, 1974.

Interstate migration data for Oregon State Economic Area 1 (Pacific Coast and Southwestern Counties), as reported by Holden and Shepard (1974:43-44), show a general population deficit. Douglas County, however, does not appear to correspond. While Holden and Shepard's data show only a .6% net increase of population for State Economic Area (SEA) #1 in the year 1970, the average annual net gain for Douglas County from 1970 to 1973 has been 2.4% or 4 times the net growth rate for SEA #1 in 1970 (Holden, A. and W. B. Shepard 1974). Assuming a Douglas County correspondence with SEA #1 data, in terms of in-migration, by far the largest percentage of in-migrants from outside of Oregon come from California. The largest percentage of in-migrants from other places in Oregon come from the Portland metropolitan area, the mid-Willamette Valley and Lane County. Migration data for Douglas County and the South Umpqua would indicate a general vitality and attractiveness of the area, much more so than for the Pacific Coast and southwestern counties in general.

Population changes in the past decade for communities in the secondary impact area of the Days Creek Dam show a variable growth pattern. Roseburg and Myrtle Creek have shown marked population size increases during the 1960's and a continuation in the 1970's. The 1970's show an accelerated growth for Winston and Riddle. Rates are as follows:

TABLE 8

## DOWNSTREAM COMMUNITY POPULATION GROWTH, 1960-75

|                  | 1960 Population | 1970 Population/<br>Percentage Change | 1974 Population/<br>Percentage Change |
|------------------|-----------------|---------------------------------------|---------------------------------------|
| Roseburg.....    | 11,467          | 14,461/+26.1                          | 16,602/+14.8*                         |
| Myrtle Creek.... | 2,231           | 2,733/+22.1                           | 2,945/+ 7.8                           |
| Winston.....     | 2,395           | 2,468/+ 3.0                           | 2,900/+17.5                           |
| Riddle.....      | 992             | 1,042/+ 5.0                           | 1,145/+ 9.9                           |

\* 1975 data.

Note. 1960, 1970 data are from U.S. Census, op.cit. 1974, and 1975 data are derived from Supplement to Certificate of Population Enumerations and Estimates of Counties and Incorporated Cities of Oregon, July 1, 1974 and March 31, 1975, Portland State University.

Roseburg's growth in part is due to annexation, whereas the Winston and Riddle growth of this decade is attributed in part to upward trends in the lumber industry. Myrtle Creek's growth is partially due to directed change stemming from attempts to get a population excess<sup>8</sup> in Roseburg to locate in Myrtle Creek.

Community and general population changes in the upstream (primary impact area) are difficult to specify because only Canyonville has census data available. Days Creek, Milo, Tiller, Jackson Creek and Drew data are reported in summary form. The following table is based upon certified data for Canyonville and estimates for the other communities. The estimates include the rural environs of the small unincorporated

8. A lack of available housing, treated later, is part of the reason for such encouragement. So, too, is planning to control the rate of growth of the Roseburg area.

communities and are therefore high for the physical areas of the communities themselves.

TABLE 9

UPSTREAM AREA AND COMMUNITY POPULATION GROWTH, 1960-1976  
PERCENTAGE CHANGES FROM PREVIOUS ENTRY

|                          | 1960 Population | 1970 Population/<br>Percentage Change | 1974 or 1976<br>Population/<br>Percentage Change |
|--------------------------|-----------------|---------------------------------------|--|
| Canyonville.....         | 1,089           | 940/-13.7                             | 1080/+14.9 (1974)                                |
| Days Creek.....          | 575             | 616/+ 7.6                             | 1109   |
| Milo.....                | 75              | 109/+45.3                             | 151  |
| Tiller-<br>Jackson Creek | 172             | not available                         | 294/+70.1 (1976)                                 |
| Drew.....                | 109             | not available                         | 186/+70.6 (1976)                                 |
| Tiller R.S.....          | 70              | not available                         | 120/+71.4 (1976)                                 |

Note. Sources include: Supplement to Certificate of Population Enumerations and Incorporated Cities of Oregon, July 1, 1974, Portland State University. Estimates (uncertified) provided by U.S. Postal Service offices in Days Creek and Tiller, Oregon, March, 1976. The changes here indicate mail service recipients factored by 3.5. Data from 1960 may be low and the 1976 estimates are subject to error.

Canyonville's loss of population is said to relate to the depression of logging activities and to "a number of gypo operators going broke"<sup>9</sup> and leaving for employment elsewhere. Days Creek's growth is attributed to "urban escapism,"<sup>10</sup> according to local informants. Milo's growth is

9. Anonymous informant.

10. This phenomenon simply means that people from urban and suburban areas have sought the South Umpqua as a bucolic refuge from many of the previous problems they have faced in cities or suburbs.

associated with growth of the Seventh Day Adventist Academy located there as well as with urban emigration.

Inconclusive data on the upstream area indicate an overall paradigm of small community and rural area population growth in the past decade and a half. People interviewed regarding population changes from 1940 through 1960 indicated that the upstream region had been "pretty stable" during those two decades. The over 70% increase in population suggested for the Tiller (and Jackson Creek)-Drew-Tiller Ranger Station area in the past 16 years compares favorably even with Roseburg's growth in the period 1960-1975 (+44.8%) and Myrtle Creek's (+32%) increase from 1960-1974. Explanations of this small community and rural area growth can be sought in terms of the urban/suburban escapism phenomenon, particularly out of California and the Willamette Valley. Still, Roseburg draws upon rural areas of Douglas County for its growth. Data are developed later to show immigrational circumstances for study and relocatee segments of the upstream population.

Thus from the standpoint of population maintenance and growth alone, it would appear that Douglas County and the South Umpqua regions are capably meeting the fundamental cultural function of population viability. Considering the other important dimension of this variable, population health, the same circumstance prevails.

2. Health. Public health data on Douglas County shows a pattern of population well-being according to state comparative standards while health facilities and the availability of medical personnel in the South Umpqua are lower than for the state as a whole.

Medical facilities include four general hospitals in the South Umpqua. All but one of these are in the downstream region. Two of them are in Roseburg. The following table shows available facilities and the extent of their use in 1971:

TABLE 10  
SOUTH UMPQUA MEDICAL FACILITIES AND  
PERCENTAGE OF OCCUPANCY, 1971

| <u>General Hospitals:</u>         | <u>Total Capacity</u> | <u>Percent of Occupancy</u> |
|-----------------------------------|-----------------------|-----------------------------|
| Canyonville.....                  | 22                    | 63                          |
| Myrtle Creek.....                 | 20                    | 27                          |
| Roseburg (2).....                 | 203                   | 48                          |
| <u>Long Term Care Facilities:</u> |                       |                             |
| Roseburg.....                     | 34                    | 44                          |
| <u>Nursing Homes:</u>             |                       |                             |
| Roseburg.....                     | 264                   | 88                          |

Note. Sources include: Oregon State University Extension Service, Resource Atlas, Douglas County Oregon, 1973, p. 42, after Oregon State Board of Health, Oregon, Plan for Construction and Modernization of Hospitals, Public Health Centers and Medical Facilities, 1971 Annual Revision, Health Facility Planning and Construction Section, 1971.

Ratios of medical personnel to the population in Douglas County compare very unfavorably with the state as a whole. The following increases in personnel in Douglas County are required to achieve state ratio levels:

TABLE 11

MEDICAL PERSONNEL DEFICITS FROM  
STATE RATIOS, DOUGLAS COUNTY, 1969

| <u>Professional Category</u>        | <u>Necessary Increases<br/>to Achieve State Ratios</u> |        |
|-------------------------------------|--|--------|
|                                     | %  | Number |
| Medical Doctors and Osteopaths..... | 69%  | (55)   |
| Dentists.....                       | 96%  | (24)   |
| Registered Nurses.....              | 51%  | (88)   |
| Licensed Practical Nurses.....      | 45%  | (22)   |
| Pharmacists.....                    | 35%  | (13)   |

Note. Sources include: Oregon State Executive Department, Program Planning division, District Facts, 1970 (cf. Oregon State University Extension Service, Resource Atlas, 1973, p. 43.

Health statistics for Douglas County in 1970 show that the population exceeded state frequencies in only a very few morbidity or mortality causes. Morbidity tables show influenza rates for Douglas County to exceed state frequencies by 166%. Tuberculosis rates exceeded the state frequency by 9%. Venereal diseases and hepatitis were less than half the state frequency and measles were reported only 12.7% as frequently as in the state as a whole (cf. Oregon State Department of Human Resources, Oregon State Health Division, Vital Statistics Annual Report, 1971).

Mortality statistics show Douglas County to exceed state frequencies in diabetes mellitus, arteriosclerosis, some cardiovascular diseases (not including heart diseases and arteriosclerosis), "certain infancy mortality

causes", accidents, suicides and homicides. Significantly excessive frequencies are noted for diabetes mellitus (+47%), certain infancy mortality causes (unspecified +37%), accidents (+36%), and homicides (+127%). Frequencies lower than state ratios are noted for cerebrovascular disease, peptic ulcers, cirrhosis of the liver and congenital anomalies.

Birth and death rate data on Douglas County show increases in both during the period 1967-1970. Even so, in 1970 the birthrate for the county slightly exceeded the state (17.5:16.9) and the death rate was slightly less than for the state as a whole (9.1:9.3). While certain infant mortality causes cited above were higher than for the state, all infant mortality was slightly less than for the state as a whole. An unexplained excessive frequency of premature births (+39%) is noted for Douglas County in 1970 (ibid.).

From the standpoint of public health, Douglas County and the South Umpqua Region show a general vitality that is, in most cases, above the level of health of the state as a whole. Douglas County spends 21.5% more per capita for public health than do all other counties in the state (Oregon State University Extension Service, 1973). The area is deficient from the standpoint of upstream services and the entire county, especially all areas outside of Roseburg, lack sufficient medical personnel. The health picture is nevertheless supportive of the judgment that the cultural function of population viability is being met. Services can no doubt be improved and given a major population upswing, they must be improved.

## Livelihood and Subsistence

Employment opportunities and people's actual involvement in making a living are closely related to the South Umpqua's major resources and their availability for human use. In order, these include the wood products' industry, agriculture, mineral extraction and processing and food and kindred products industries. The major role of agriculture in the county, the second most important industry, belies the small number of salaried people directly involved in agricultural work or management. By far the

TABLE 12

COVERED EMPLOYMENT BY INDUSTRIES,  
DOUGLAS COUNTY, 1970

| <u>Industry</u>                     | <u>Average Annual Employment</u> |
|-------------------------------------|----------------------------------|
| Lumber and wood products            | 7,495                            |
| Wholesale and retail trade          | 3,435                            |
| Government                          | 1,601                            |
| Services                            | 1,501                            |
| Other manufacturing                 | 1,169                            |
| Transportation and utilities        | 824                              |
| Contract construction               | 712                              |
| Finance, insurance, real estate     | 430                              |
| Food and kindred products           | 325                              |
| Mining                              | 213                              |
| Agriculture, forestry and fisheries | 133 <sup>11.</sup>               |

11. Does not include self-employed farm operators who number 593 persons. Source: Oregon State Department of Human Resources Employment Division, Oregon Covered Employment and Payrolls, 1970 and 1971, Summary Data 1971, 1972.

majority of the country's workers are involved in the forest products industry. The table above shows average employment in 1970 by industry classification and according to covered payroll.

Of the some 24,084 people employed in 1970, the largest percentages were in operatives (15%), craftsmen, foremen and kindred workers (15%) categories. The next categories included clerical and kindred workers (12%), professionals (12%), nonfarm laborers (11%), service workers (11%), managers and administrators (8%), salesworkers (6%), transport workers (6%), farmers and farm managers (2%), farm laborers (1%) and private household workers (1%). Women constituted 32% of the labor force in 1970. Unemployed members of the labor force increased by 7% from 1960 to 1970 and the highest percentage of unemployed are consistently found in laborers, operatives and kindred worker categories (cf. Oregon State University 1973:30-31).

The highest annual covered payroll is provided by the wood products industry, followed by wholesale and retail trade, government and manufacturing. The median income for males with earnings in Douglas County in 1969 was \$7,571 (\$7,712 in Roseburg) and for women it was \$3,000 (3,335 in Roseburg). Most of the seasonal agricultural workers (2,045 people in August, 1969) were drawn from the local area and their activities predominate in July and August. Just over 25% of the country's families had incomes of less than \$6,000 per year in 1970. Over 16% in the county earned less than \$4,000 per year in 1970. Ten and four tenth's percent of the people in Douglas County are listed as below the poverty datum level (\$3,000) in 1970 (State of Oregon 1973:34-36).

1. Forest Products. Since 1940 Douglas County has possessed a highly specialized and undiversified economic base that is fundamentally dependent upon the wood products industry. Throughout the period of the 1960's, almost one-third (30%) of the people were employed in the wood products field. Eighty-five percent of all manufacturing employment in the period was from forest based industries (U.S. Government 1971b:12).



FIGURE 9. LUMBER MILL IN DOUGLAS COUNTY

Data show that this heavy involvement in forest products relates most positively with the available timber in the county. About 86% of the total acreage of the county is in commercial forests (State of Oregon 1973:11) and Douglas County possesses 9% of all commercial timber in the Pacific Northwest and 4% of all commercial softwood timber in the nation (U.S. Government 1971a:25).

Only about 13% of the over 7,000 persons employed in the lumber and wood products industry are actually involved in logging and contracting operations. The remainder are involved in some form of intermediate processing such as veneer mills (62%), sawmills and planing mills (22%) or specialty processing of a wide variety (3%). The greatest timber harvest has been from private lands but log production has lagged behind peak 1955 levels (Oregon State University 1973).

2. Agriculture. Agricultural employment and commercial activity occupies a secondary position to the forest products industry in Douglas County. Agricultural lands comprise about 13% of the county's total area and most of the agricultural land is devoted to livestock production (State of Oregon 1973:11). Douglas County leads Oregon in sheep

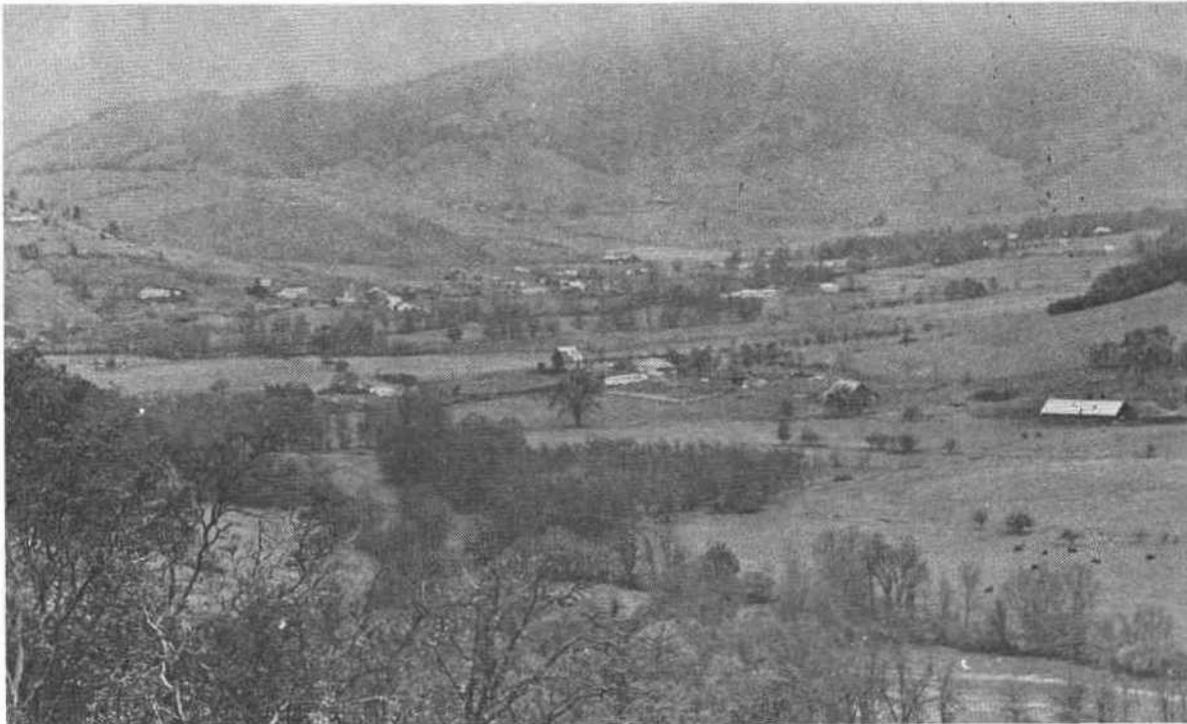


FIGURE 10. AGRICULTURE IN DOUGLAS COUNTY

production (85,000 head annually in recent years). Cattle production is nearly 40,000 head annually. The most important crops of the county in 1970 included fruits, nuts and hay. Berries, melons and vegetables have been increased in recent years to meet growing local and regional demands. Specialty horticultural crops are said to be on a very recent increase.

In comparison with the Willamette Valley and the whole of Oregon, Douglas County is showing more rapid growth in livestock production, specialty horticultural crops and the summary category, all crops. Tree fruits and nuts in Douglas County and the South Umpqua have shown a marked decrease in the past decade (ibid.).

Employment in agriculture involves few people directly (as covered payroll members). It is important to over 2,000 county residents as an income supplement in the harvest months of July and August. Very few migrant laborers are employed in agriculture in Douglas County. Food and kindred products workers numbered 432 in 1970, which raises the overall number of farm-related workers (farmer, farm manager, and agricultural laborer, both seasonal and nonseasonal) to in excess of 3,000 (ibid.).

Douglas County lags behind the national and Oregon trend so far as the reduction in the number of small farmers is concerned. Douglas County showed a 6% increase in the number of farms from 1964 to 1969 while the Willamette Valley counties experienced a 7% decrease. In the succeeding five year period the Willamette Valley experienced an enormous 27% decrease while Douglas County witnessed an even greater 37% decrease (Oregon State University Cooperative Extension Service 1971 and Oregon State University Extension Service 1973). The trend in Douglas County,

as elsewhere, shows fewer but larger commercial farms and a clear selection against the small family farm operation.

Thus Douglas County's agriculture is growing with respect to production but losing its previously higher degree of direct human involvement.



FIGURE 11. NICKLE MOUNTAIN

3. Mining, smelting and other mineral production. Douglas County has for several years led the state in mineral production. Problems of pricing have caused the curtailment or serious cutback in some operations but production in others, such as nickle, have been expanded markedly. The overall value of mineral production declined by 5% in the period from 1964 through 1968. It has since maintained almost stable levels (State of Oregon 1973).

The primary income of minerals in Douglas County is derived from nickle, sand and gravel, stone, and mercury and gold. Some pumice operations are economical as well. The Hanna nickle mining and smelting operation near Riddle is the only such system in the United States and is excavating the top of Nickle Mountain. Sand and gravel operations account for the second largest share of production and payroll (U.S. Government 1971b). Other minerals available for commercial product, but extracted intermittently depending upon prices, are chromite, copper, zinc, subbituminous coal, sulphur and quicksilver (ibid.).

In 1970 approximately 480 Douglas County people were employed in mineral, metal and related manufacturing. Some 400 of these worked in primary smelting and refining. Two hundred thirteen people were employed by the mining industry in 1970 (ibid.).

4. Recreation and Tourism. As is the case of the remainder of the Oregon, Douglas County derives a major source of income from recreation and tourism. Noted attractions are Crater Lake National Park, Diamond Lake, the North Umpqua River, the Rogue River, the coast, and to a lesser extent, the upper reaches of the South Umpqua River. All of these regions are within an hour's drive of the city of Roseburg and within but a half-days ride of the major metropolitan centers of the Willamette Valley (U.S. Government 1971a:27).

In 1973 the county possessed 131 park facilities, 52 of which were under county maintenance, 15 under state authority and 64 of which were under federal jurisdiction. Douglas County markedly expanded its parks and recreation expenditures in 1968 from \$281,000 to nearly \$844,000 but

little in the way of county funds found its way into new developments in the upper region of the South Umpqua. Excluding the Canyonville area proper, only one county recreational facility (Carl C. Hill Wayside) is located in the primary impact area of the proposed Days Creek Dam. That facility would be inundated by the Days Creek Reservoir. No state park sites are located upstream from Canyonville. Eight federal park sites are found in the Upper South Umpqua and most of these are remote. Numerous county and a few state parks are found in the lower drainage of the South Umpqua. (State of Oregon 1973).



FIGURE 12. FISHING ON THE SOUTH UMPQUA

The chief outdoor recreational activities in the South Umpqua include hunting, fishing, picnicking, camping and boating. The Oregon State Game Commission's Annual Report for 1968 showed 40,314 hunter days in Douglas County, not including the deer hunting figures. A conservative estimate on deer hunter days (45,000) would cause the total hunter days in the county in 1968 to exceed 85,000, or, in excess of one day hunting for every human resident of the county. This, of course, does not consider out-of-county hunters or the realities of licensing. Fishing activity primarily surrounds trout angling, salmon and steelhead angling, and lake fishing. The North Umpqua is widely renowned for its fishing and the summer period is especially popular. Local residents take advantage of the salmon and steelhead runs on the North Umpqua in the fall and winter and claim the fishing to be superb. The South Umpqua is said to be a poor choice for any kind of fishing except in late spring. Lake fishing, especially at Diamond Lake, is extremely popular with 105,891 angler trips recorded for Diamond Lake in 1968 (cf. State of Oregon 1973).

Other major South Umpqua recreation includes use of swimming, tennis and other public facilities, particularly in Roseburg. Strong support for local school teams, especially in football, basketball and baseball is a tradition of the area. Local clubs, restaurants, night clubs and taverns enjoy reasonable profits in the South Umpqua, especially in the central valley lowlands.

#### Communities: Values and Organization

It is a common mistake to confuse physical aggregates of human beings with communities in the full sense of the term. Cities, towns, or even small hamlets may in fact consist of numerous communities,

organized aggregates of human beings who perceive a commonness in goals. In quite precise terms there are literally thousands of communities within the South Umpqua River Basin. In relative terms, as a matter of degree, one still could discern hundreds of them. Because of the cultural mix and pluralism in the basin, especially in the central valley lowland, only a general degree of community can be proposed with any reason. In the rural areas of the basin, particularly in the more isolated hill and mountainous zones, a greater range depth of commonality can be observed. Still, even here, precise statements about community boundaries and the reasonably synonymous notion of social system boundaries carry a requirement for observation and recording that goes far beyond our real or expected effort.

The towns, villages and hamlets of the South Umpqua nevertheless developed historically from the common efforts and organization of people. These same people established an early community style and sought, however unsuccessfully, to maintain a given purpose or set of values and attitudes among a settlement's inhabitants. Some of that style and those values are retained in a few places. Many of them have been changed or rendered extinct by the passing of time, the alternation of technologies and the coming of new people not socialized in the old way or life style.

The previous chapter outlined the originating circumstances and some of the early characteristics of the towns and villages of the South Umpqua. The purpose of this discussion is to offer a general description of the cultural characteristics of these "communities" in the present in

order to provide a cultural baseline for consideration of the social behaviors and attitudes of people sampled in the social survey.

1. Ethos. The "bustling urban center" of Douglas County, Roseburg, shows substantial diversity in its people, their social identities and activities, and offers diverse choices for occupations, social involvements and life style. Roseburg conveys a style that is a mix of western traditions--logging and lumbering, ranching and the cowboy style, and a middle-class modern style. The mixed western ethos of traditional and western style contrasts with rural areas and smaller towns of the basin that manifest a more homogenous and more consistent style of life surrounding lumber and agrarianism.

The significance of lumbering and the milling economy cannot be overestimated. The acknowledged human dependency upon forest products and their processing dwarfs many other concerns. People involved in the wood products industry are "legitimate." Loggers, millworkers and construction workers epitomize appropriate masculine endeavors. White collar and other professionals, while given status and rank in terms of salary and general affluence, represent a new and somewhat alien order of human value, particularly those people in intermediate commercial roles. A large factor in the significance of agriculture to the economy can be attributed to the fact that people still regard the farmer and the farm worker to be involved in an ideal type subsistence activity. The tradition of deriving a livelihood from the soil goes back to the early settlement period and beyond. The family farm is an ideal type and while it appears doomed by present economic constraints, it nevertheless carries a

strong archetype value that permeates even to the roles of those who process agricultural products in modern processing plants.

In general, it can be observed that upstream regions of the South Umpqua tend more toward the idealization of the lumbering-farming ethos than the culturally mixed lower basin and its more urban populace.

One reason for the attraction of newcomers to the upper basin is its explicit lumbering-farming emphasis. The area attracts and retains people committed to the value configurations that surround such enterprise. Many of the newcomers come from very similar areas; others as escapees from the city and suburbia.

2. Organization. Specific human organization preferences and behaviors of people of the South Umpqua are dealt with in the next chapter. Three general patterns of human organization are observed to prevail in the South Umpqua.

In and adjacent to the community of Roseburg is a pattern in which people and social organizations, aside from the economic and political structures which are more stable and predictable, relate to each other generally in an ad hoc fashion. Social relationships tend to be diffused and roles are differentiated to the extent that people's contacts beyond family and neighborhood are intermittent and usually dictated by some factor other than sociation itself.

This nonarticulated pattern of social relationships for the social networks of Roseburg and its environs is quite consistent with and characteristic of the cultural mix of people found in the area. It offers

tangible evidence that Roseburg represents in its microcosm the same social characteristics as larger metropolitan centers.

Small rural downstream towns, particularly Riddle, Winston and Myrtle Creek, show some manifestation of nonarticulation, but by no means to the same extent as the larger area of Roseburg. Canyonville, too, manifests some of this patterning. In the main, however, these smaller towns and their immediate rural environs manifest a much more articulated social structure, one in which people's roles are differentiated but, in general, consistently tied to a hierarchy of influence and wealth that mirrors local economy and politics. While social status differentials exist, they are by no means as distant and diffuse as in Roseburg and its adjacent towns. Wealth and influence differentials in small towns tend toward the crystallization of two categories of people--those who are "established" and those who aren't. Intermediate categories are recognized, but generally they are associated with the former two in terms of people's social definition and the prospect for their future position.

Upstream communities manifest articulation to a degree. The greater degree is found in Days Creek itself and in rural areas up to and including Milo. Here wealth differentials come mainly in terms of land holdings and outside sources of wealth. The social station of a "loser" is defined as one without land and traditional skills in lumbering or farming.

The even smaller communities, such as Tiller and Jackson Creek, also show an undifferentiated structure, one in which people's jobs and roles are roughly equivalent and in which wealth and influence differentials are the exception rather than the rule. Such an equivalent,

undifferentiated pattern is termed a reticulated social organization. Family, kin and neighborhoods extend virtually across whole physical communities and, with the exception of a few stranger elements and enclaves of government workers, people know each other in quite intense and affective ways. Here strangers are held at arms length until such time as they indicate to the native or accepted resident that they are willing to work and relate to others in ways that are traditionally acceptable through farming or logging. Even the isolated commune members, for all of the stereotypes that befall them, are generally accepted because of their commitment to the soil and hard work.

The ethos and organization of people in communities of the South Umpqua closely correlates with the historically developed sense of human worth and adequacy that the Umpqua has stimulated. The logging-farming ethos, together with the recent industrial-urban overlay, provide the dominant cultural correlates of a diverse yet discernible set of human organization patterns. The ecology of the basin has played an essential role in the development and survival of ethos and human organization. The advent of industrialism and its sustaining cultural mix of people has generated a mix and disintegration of many previous patterns.

#### Communications

In the sense that it is used here, communications embrace not only the technology of radio, television, newspapers, libraries, and telephone, but also the transportation features of the South Umpqua--the uses of road, rail and air by people of the area.

Douglas County is served by four radio stations, two of which have national network affiliations. One television station emanates from Roseburg as an NBC affiliate. Telephone service is provided by two companies in the South Umpqua (cf. Oregon State University Extension Service 1973). According to census data for 1970, in Douglas County 74% of the houses possessed battery radio sets, 85% of the houses possessed telephones, 76% of the households possessed one television set and 17% possessed two or more (ibid.).

Nine newspapers are published in the county, four in Roseburg. The largest of these, a daily, is The Roseburg News Review. Five public libraries are located in the South Umpqua at Roseburg, Winston, Myrtle Creek, Riddle and Canyonville, with a total number of volumes at 107,522 and a circulation of nearly 300,000 in 1969-70 (Oregon State Library, Director of Libraries, 1970). The greatest circulation is at Myrtle Creek, followed by Riddle, Winston, Roseburg and Canyonville.

Douglas County is served by a variety of means of transportation. The main portion of the railroad runs in a north-south direction connecting the South Umpqua with the Willamette Valley and California. Lumber products are shipped mostly south to California in order to connect with the national market system (Douglas County Planning Commission 1968:51). Unfortunately, rail lines do not run directly to the coastal ports from the South Umpqua. Freight destined for transoceanic shipment must be carried by motor express to the coast or shipped to Eugene by rail and then directed west.

No state owned or operated air fields exist in Douglas County at present. There are several private airfields, but they are not served by commercial air transport (State of Oregon, 1973). Reedsport is the main hub of water transport for the county. Traffic here is in terms of oceanic transport and of coastal barge services (Douglas County Planning Commission 1968:51).

Highway networks primarily emanate from the interstate freeway system (I-5) running in a northerly and southerly direction through the central part of the county. A myriad of roads emerge from the freeway which run in an easterly and westerly direction. Of paramount importance to this report is the discussion of Highway 227 which is the main highway artery from Canyonville to Jackson Creek. Highway 227 will be the only access to the proposed dam site at Days Creek. The highway's present condition is not extremely desirable. It is very crooked and narrow and its condition will need to be vastly improved in terms of resurfacing and straightening if the dam is to be built. More discussion will be made of this highway in reference to the "with and without dam" projections for this area.

#### Innovation

The history of major innovations affecting the South Umpqua's resources was addressed in the previous chapter. As pointed out there, the major innovation of this century, so far as technology is concerned, has been the complex of events surrounding the mechanization and industrialization of the timber products industry. Better road transport, improved communications, highly automated log removal and processing has

had the effect of taking a greater percentage of people out of the woods and placing the vast majority of workers in a variety of mills serving local, regional and national demands for timber products.

Mechanized and industrialized agriculture parallels but is dwarfed by developments in the logging-lumbering field. Urbanization and associated commerce have encouraged the development of larger business enterprises and have limited the options of small businesses and operators of all kinds. The concentration of larger numbers of people in the lower basin following the decade of World War II has placed new limits on subsequent growth and now requires still other cultural innovations in order to correct environmental imbalances and to foster further industrial and commercial growth for the county.

The proposed Days Creek Dam is one such innovation. Its benefits in cultural terms are means to further elaboration and growth of the type system that has evolved in this century. Its costs in cultural terms are limitations or losses of many older cultural traditions that continue to be characteristic of the upper basin particularly. The effects projections addressed in later chapters detail some of these cultural implications.

#### Major Imbalances in the Present Cultural-Environmental Interplay of the South Umpqua River Basin

Natural forces contribute substantially to the difficulties of water quality and quantity in the South Umpqua River Basin. In addition to these factors, the activities of human beings make still other excessive demands on the hydrological cycle of the region. One of the most

damaging of these is the destruction of the natural forest cover. The loss of ground cover from logging practices, construction work, roads, farm and grazing land causes still additional silt and debris to be deposited in the South Umpqua and to be carried downstream during high water conditions. The scouring of stream banks creates erosion and further sedimentation. This also reduces the carrying capacity of the stream as well as covering and destroying spawning beds of fish (Hayes and Herring, 1960:16-22).

Other problems of water quality result from industrial, municipal, domestic, mining and agricultural wastes. Industrial wastes from pulp and paper mills produce toxic acids which make the water unsuitable for human and animal use. While these are only a few of the problems related to water quality and quantity, they must be abated before expanded human use can be accomplished.

Another potential imbalance occurs in the cultural system itself. This involves the provision of adequate human services, especially in terms of housing, health, police and fire protection, as population levels continue to expand in the South Umpqua. This circumstance is most critical in rural and upper basin areas. These facilities and services already are taxed to near limits. Subsequent population and economic growth will require public expenditures to avoid crisis, let alone to achieve balance.

Continued industrial growth in the South Umpqua is bound to further deteriorate water quality and to accelerate urban growth. Plans for community growth in the flood plain of the Umpqua, especially in the

Tri-City area near the confluence of Cow Creek and the South Umpqua, will create needs for still more flood control and water quality augmentation projects. Balanced, planned population and economic growth is critical in the South Umpqua where a flexibility in interplay already has been exceeded.

## Chapter IV

### PRESENT SOCIAL ENVIRONMENT

In accordance with the initial social profile requested in the methodological section of Section 122 (U.S. Government 1973), this chapter's reference is to the present (pre-construction, pre-impact) configuration of the social environment and systems operating in both the primary and secondary impact areas of the Days Creek Dam. Described in turn are (1) demographic and biographical characteristics of the people; (2) their social characteristics, including education and recreation; (3) socio-economic characteristics; (4) environmental-esthetic attitudes; (5) socio-political characteristics; (6) water resource development attitudes; (7) socio-psychological characteristics, and (8) social system boundaries and characteristics of the people of the study area. This social profile serves as a projection base for social profiles with and without dam construction. Data, as previously mentioned, were derived from a field survey, selective interviews, observations, and reviews of literature on the primary and secondary impact areas of the proposed Days Creek Dam.

#### The People: Their Backgrounds and Biographic Characteristics

The South Umpqua River Basin holds an attraction for a variety of residents and recent migrants. Members of our sample indicated that

real or prospective employment was the primary motivating force that brought them to the area. Relocatees indicated strong employment-related factors; they also indicated that the beauty of the upstream area and the desire to escape from city life were of equal importance in their decision.

Most of the newcomers to the South Umpqua came from communities where employment is oriented toward farming, ranching and logging or wood-related industry. The following table shows the percentage of newcomers to the South Umpqua.

TABLE 13

SAMPLE AND PERCENTAGES OF NEWCOMERS TO SOUTH UMPQUA

| <u>Category</u>        | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|------------------------|---------------------|---------------|------------------|
| Newcomer . . . . .     | 35                  | 49            | 54               |
| Mid-Resident . . . . . | 43                  | 36            | 37               |
| Native . . . . .       | 18                  | 14            | 9                |

Note: Totals do not equal 100% due to the deletion of no response items.

The relocatees have the highest percentage of newcomers and the lowest percentage of native residents.

Table 14 gives the percentage of age groups in categories for the sample in comparison to the county and state percentages.

TABLE 14  
SAMPLE AND AGE BREAKDOWN, IN PERCENTAGES

| <u>Age Group</u>   | <u>Downstreamer</u>                         | <u>Stayer</u> | <u>Relocatee</u> | <u>County</u> | <u>State</u> |
|--------------------|---|---------------|------------------|---------------|--------------|
| 24 Under . . . . . | 20  | 22            | 7                | 46            | 45           |
| 25-29 . . . . .    | 10  | 14            | 6                | 6             | 7            |
| 30-39 . . . . .    | 24  | 17            | 27               | 12            | 11           |
| 40-49 . . . . .    | 12  | 13            | 16               | 12            | 12           |
| 50-59 . . . . .    | 13  | 9             | 18               | 12            | 11           |
| 60-64 . . . . .    | 6   | 8             | 7                | 8             | 4            |
| 65 Over . . . . .  | 16  | 17            | 18               | 5             | 11           |
| TOTAL              | 100* <sup>12.</sup><br>N=127 <sup>13.</sup> | 100<br>N=123  | 100*<br>N=55     | 100*          | 100*         |

As indicated, the South Umpqua sample is low in proportion to the younger aged groups, while having higher percentages in mid-aged and retired when compared to county and state age statistics.

Because of the limitation on interviewing people of minor ages, the sample shows a much lower percentage of people under 24 years of age.

<sup>12.</sup> Asterisks occur where rounding accounts for a deviation up to 1%.

<sup>13.</sup> The N for this table and all subsequent tables varies from Table 3 in Chapter 1 due to incomplete interviews.

Variances are noted from county figures in terms of a slight sample bias toward the following age brackets: 25-29 (except for relocatees); 65 and over.

TABLE 15  
SAMPLE AND SEX BREAKDOWN IN PERCENTAGES

| <u>Sex</u>  | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> | <u>County</u> | <u>State</u> |
|-------------|---------------------|---------------|------------------|---------------|--------------|
| Male.....   | 38                  | 43            | 53               | 50            | 49           |
| Female..... | 62                  | 57            | 47               | 50            | 51           |
| Total       | 100<br>N=127        | 100<br>N=123  | 100<br>N=55      | 100           | 100          |

A sample bias toward female respondents is acknowledged for the downstreamer category.

Most of the sample residents were married; only a small percentage were either single, widowed or divorced.

Residents of the South Umpqua come from a variety of regional backgrounds. Relocatees are much less of an indigenous element than are downstreamers and stayers. The following figure best illustrates this.

Exposure to little regional diversity occurred for most people through their childhood, as most indicated the region where they were born in the same one in which they were raised. Exceptions were for those persons of foreign origin. Even though they were foreign born, most spent their childhood in Oregon and later migrated to the South Umpqua. Further background investigation reveals that many came from

TABLE 16  
SAMPLE AND BIRTHPLACE IN PERCENTAGE

|                          | <u>Downstreamer</u>  | <u>Stayer</u>        | <u>Relocatee</u>    |
|--------------------------|----------------------|----------------------|---------------------|
| South Umpqua Native..... | 16                   | 19                   | 12                  |
| Other Oregon.....        | 23                   | 13                   | 14                  |
| Northwest U.S. ....      | 11                   | 11                   | 14                  |
| Southwest U.S. ....      | 14                   | 19                   | 27                  |
| Midwest-Plains ....      | 23                   | 21                   | 19                  |
| Other U.S. ....          | 12                   | 15                   | 13                  |
| Foreign Born .....       | 1                    | 1                    | 0                   |
| Total                    | <u>100*</u><br>N=127 | <u>100*</u><br>N=123 | <u>100*</u><br>N=55 |

middle to small sized towns, and one could assume that they brought with them a corresponding ethos. The following tables show this provenience in the stayer and relocatee populations.

The South Umpqua receives immigrants from other rural areas but to a smaller degree than from urban areas. Further correlations reveal that the most recent migrants or newcomers to the upstream area among the stayers were people who came from cities of less than 15,000 and more than 100,000, thus reinforcing the rural ethos and urban escapee phenomena and creating a bifurcated population with respect to background. Relocatee newcomers showed an even greater bifurcation from hamlet-village to megalopolis backgrounds.

TABLE 17

STAYER AND RELOCATEE PROVENIENCE: SIZE OF TOWNS OF ORIGIN, IN PERCENTAGE

|                                      | <u>Stayer</u> | <u>Relocatee</u> |
|--------------------------------------|---------------|------------------|
| Hamlet (1-500) .....                 | 12            | 21               |
| Village (501-1,500) .....            | 21            | 14               |
| Small Town (1,501-5,000) .....       | 17            | 11               |
| Middle Town (5,001-15,000) .....     | 15            | 18               |
| Large Town (15,001-35,000) .....     | 5             | 5                |
| Small City (35,001-100,000) .....    | 5             | 12               |
| Middle City (100,001-500,000) .....  | 5             | 2                |
| Large City (500,001-1,000,000) ..... | 2             | 0                |
| Megalopolis (1,000,000+) .....       | 6             | 7                |
| No response .....                    | 12            | 10               |
| Total                                | 100<br>N=123  | 100*<br>N=55     |

People who had resided in the South Umpqua less than 5 years defined themselves as newcomers but each had different identities with the region and the physical community of which they were a part. The majority of the newcomer element indicated that they felt they were a part of the whole community in which they resided. In general, they felt they had adapted very rapidly.

TABLE 18

STAYER AND RELOCATEE PROVENIENCE: REGIONAL ORIGIN, IN PERCENTAGE

|                           | <u>Stayer</u>        | <u>Relocatee</u>    |
|---------------------------|----------------------|---------------------|
| South Umpqua Native ..... | 19                   | 12                  |
| Other Oregon .....        | 14                   | 12                  |
| Northwest U.S. ....       | 11                   | 15                  |
| Southwest U.S. ....       | 19                   | 27                  |
| Midwest Plains .....      | 18                   | 19                  |
| Other U.S. ....           | 18                   | 14                  |
| Foreign born .....        | 1                    | 1                   |
| Total                     | <u>100*</u><br>N=123 | <u>100*</u><br>N=55 |

TABLE 19

SAMPLE AND LENGTH OF RESIDENCE, IN PERCENTAGE

|                          | <u>Downstreamer</u>  | <u>Stayer</u>        | <u>Relocatee</u>    |
|--------------------------|----------------------|----------------------|---------------------|
| Less than one year ..... | 9                    | 11                   | 4                   |
| 1-5 years .....          | 26                   | 34                   | 49                  |
| 6-10 years .....         | 13                   | 12                   | 20                  |
| 11-20 years .....        | 10                   | 6                    | 6                   |
| 21 or more years .....   | 20                   | 21                   | 11                  |
| Native .....             | 18                   | 14                   | 9                   |
| No response .....        | 4                    | 2                    | 0                   |
| Total                    | <u>100*</u><br>N=127 | <u>100*</u><br>N=123 | <u>100*</u><br>N=55 |

As seen in the above table, the newcomer element in the upstream or primary impact area comprises a significant portion of the population. Relocatees especially illustrate this situation and, at the same time, show a surprisingly small percentage of natives.

The South Umpqua shows a fairly high degree of stability. As Table 20 reveals, at least 65% of the population has lived in up to seven towns during their adult life.

TABLE 20  
SAMPLE AND MOBILITY, IN PERCENTAGE

| <u>Number of Towns lived in as an Adult</u> | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|---|---------------------|---------------|------------------|
| 1-3 .....                                   | 39                  | 44            | 44               |
| 4-7 .....                                   | 26                  | 31            | 24               |
| 8-10 .....                                  | 6                   | 7             | 13               |
| 11-20 .....                                 | 6                   | 4             | 15               |
| 21-30 .....                                 | 2                   | 2             | 0                |
| More than 31 .....                          | 2                   | 2             | 0                |
| No response .....                           | 19                  | 10            | 2                |
|   | Total               | 100           | 100              |
|   |                     | N=127         | N=123            |
|   |                     |               | N=55             |

Those who had moved less often were the newcomers who had been attracted to the area for economic reasons; i.e., employment. Newcomers allying themselves as a community segment had moved much more frequently than those who felt they were part of the community. Although these

residents do not show vast experience in adjustment to change associated with the movement or migration experience, they do show rapid adjustment and assimilation to the community and region. A high correlation of informant age and informant mobility indicates, as expected, that as age increases among the South Umpquans, there is a correspondingly higher frequency of movement.

Social Characteristics

Family and Kin

The size of family units was quite consistent in South Umpqua households. The following table illustrates this composition.

TABLE 21

SAMPLE AND NUMBER OF PERSONS IN SAMPLE HOUSEHOLDS (EXCLUDING RESPONDENT),  
IN PERCENTAGE

| <u>Number Residing</u> | <u>Downstreamer</u>  | <u>Stayer</u>        | <u>Relocatee</u>    |
|------------------------|----------------------|----------------------|---------------------|
| None .....             | 4                    | 5                    | 2                   |
| 1-3 .....              | 67                   | 72                   | 69                  |
| 4-6 .....              | 21                   | 13                   | 20                  |
| 7-10 .....             | 2                    | 2                    | 4                   |
| More than 10 .....     | 1                    | 0                    | 0                   |
| No response .....      | 6                    | 9                    | 6                   |
| Total                  | <u>100*</u><br>N=127 | <u>100*</u><br>N=123 | <u>100*</u><br>N=55 |

In terms of children in the household, the highest percentage of

respondents said they did not presently have children residing at the same address. Data indicated that as residents' age increased, the more likely sons and daughters were to be living at the same household. Younger married couples, those less than age 34, comprised the largest age group not having children. Those from age 35 to 54 had the highest percentage of children residing at their address.

Composition of family units ranged primarily from one to three individuals not including the respondent. South Umpqua families were basically small, and of those having children in the public school system, most indicated it was not more than three. Only three families in the entire sample had seven or more children within the educational system.

In a highly mobile technological society, kin are usually not residing in nearby or immediate locales. The majority of South Umpqua residents reflected this phenomenon. Although kin may be absent in most cases, ones that are present are important in fulfilling certain social functions, such as mutual enjoyment of leisure time activities.

Relatives accounted for an important part of people's social lives in the South Umpqua. Downstreamers were not as involved with relatives as they were with friends. Stayers, and especially relocatees, indicated closer social attachments to relatives. Even though downstreamers indicated they had fewer kin residing in the immediate area, they still apparently were not as oriented toward kin interactions as the other sample groups. Quite generally, the younger age groups, those age 34 and under, tended to frequent kin more often than did others. Many families in the upstream area of the South Umpqua who have long

TABLE 22

## SAMPLE RESIDENCE AND WITH WHOM LEISURE TIME IS SPENT, IN PERCENTAGE

|                                    | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|------------------------------------|----------------------|----------------|-------------------|
| Neighbors.....                     | 13                   | 8              | 11                |
| Friends, other than neighbors..... | 33                   | 28             | 15                |
| Relatives.....                     | 23                   | 31             | 42                |
| Combinations of above.....         | 19                   | 23             | 31                |
| No response.....                   | 9                    | 9              | 2                 |
|                                    | Total                | 100            | 100*              |
|                                    |                      | N=127          | N=123             |
|                                    |                      |                | N=55              |

established residence or are natives are related, though in some cases quite distantly. There are many families in Days Creek, for example, that are related distantly from the original settlers of this area. Interviewers were given such information from the residents when they were working in the upstream area.

Even though kin are important in the social interaction sphere, sample residents felt that it was not of best interests to live in close physical proximity to one's kin. All areas agreed that a person should not select a job near his parents or reside as close as possible to relatives.

Frequency of visitations with relatives varied according to sample. Relocatees indicated that they interacted with kin at least once a month, while downstreamers and stayers did so less often. While

data are not available to the degree that kin visitation patterns may in fact be disrupted if the proposed dam at Days Creek were constructed, one might project on the available information that this would be probable. Further investigation is needed pertaining to where the kin actually reside and where the relocatees select to move.

#### Territorial Identities: Relationships to Neighborhood, Community and Area

Territorial identities of people in the South Umpqua Basin are difficult to assign. The downstream area is generally composed of incorporated cities with well-defined spatial boundaries; subsystems within these boundaries tend to follow traditional social groupings within culturally similar categories of people. In the upstream area, however, small towns do not have such well-defined territorial limits and identification with various social groupings results in more individualized perceptions of basic social units. Social systems are smaller and more diffused.

Respondents in both impact areas were required to define personally what constituted the domains of neighborhood, community and area. In this manner, their thoughts and feelings on the subject were made more meaningful and became the basis upon which their ideas and thoughts could be projected. Neighborhood was perceived as those personal social networks within an immediate locality, in many instances parallel to the environment which people could survey with the naked eye and to which they physically related on a daily basis. Community, as previously noted in Chapter Three, comprised a larger social context. They were

considered as a complex of neighborhoods consisting of people with common backgrounds, values and goals. Area is a slightly more obscure concept , but it refers to major subsettings of the South Umpqua area, such as the Tri-City area of Riddle, Canyonville and Myrtle Creek or the Roseburg area.

Once the spatial and social delineation has been made, the degree of attachment to and satisfaction with these domains was elicited. The extent to which these feelings are shared by others within and among the three sample populations is the topic of this section.

Neighborhoods. The majority of the South Umpqua Basin residents agreed with the statement that they could not have better neighbors than where they now live. They also indicated that their present neighborhood is the best of all the places they had been. Only a very few had plans to leave their current neighborhood, and this was for housing and employment reasons. Those who did plan to leave in most cases would do so within one year.

Related to this positive evaluation of the various neighborhoods is the frequent inability of respondents to identify recent changes in their most immediate surroundings: 20% of the downstreamers, 33% of the stayers and 35% of the relocatees had noticed no recent changes. Of the changes that were recognized, the downstream population noticed the most specific kinds, such as 22% indicating an increase in housing and/or change in zoning regulations. The relocatee population noted the most general changes--basically an increase of overall growth in the neighborhood. The stayer population had the most diverse responses,

indicating perhaps that there had been no recent single type of change.

When asked their feelings about the changes that had recently occurred in their neighborhoods, the relocatees were by far the most satisfied, while the downstreamers were the least satisfied. This sample population indicated by a slightly higher frequency that things were changing slower than they would prefer. There is a general correlation of perception of little change with higher degrees of neighborhood satisfaction.

TABLE 23  
SAMPLE AND FEELINGS ABOUT CHANGES: NEIGHBORHOOD, IN PERCENTAGE

|                       | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|-----------------------|----------------------|----------------|-------------------|
| As Should Be .....    | 42                   | 49             | 76                |
| Change Too Slow ..... | 23                   | 20             | 9                 |
| Change Too Fast ..... | 19                   | 15             | 6                 |
| No Response .....     | 16                   | 16             | 9                 |
| Total                 | 100<br>N=127         | 100<br>N=123   | 100<br>N=55       |

Note: The high no response figure is the result of the probe's ambiguity to many respondents.

Community. When asked to rate the attractiveness of their communities, respondents of all three sample populations felt that they were attractive by a strong majority. Responses to the question of how community appearances could be improved designated that a community beautification program would be the most effective means. This means of improvement was on an individual response, but it was indicated that such

action should be carried out on a collective basis and that a high degree of community participation and involvement would be present. Programs varied with individual responses but basically encompassed such action as general clean-up programs or planting of flowers and shrubs.

With respect to individual involvement with the community, most residents felt a strong attachment to the community. Over one-half of the residents would not like to see their children move away from the community. When asked to compare their community with another, at least 30% of each population (51% of the relocatees) were not able to do so because they felt it to be unique in its various attractions.

As far as community preference is concerned, all samples preferred one in which everybody knows each other fairly well; those preferring one in which everybody knows each other very well occurred most frequently among the relocatees. Table 24 is included to show distribution and frequency of responses concerning community preference.

TABLE 24  
SAMPLE AND COMMUNITY PREFERENCE, IN PERCENTAGE

| <u>Degree of interpersonal knowledge</u> | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|--|----------------------|----------------|-------------------|
| Very well .....                          | 17                   | 22             | 29                |
| Fairly well .....                        | 75                   | 72             | 66                |
| Not at all .....                         | 5                    | 2              | 2                 |
| No response .....                        | 3                    | 4              | 3                 |
|  | Total                | 100            | 100               |
|  |                      | N=127          | N=123             |
|  |                      |                | N=55              |

In considering the occupational characteristics of community life, the majority of South Umpqua residents felt that a community in which everyone has a different kind of job to do would be preferable. This preference for diversity in relation to individual community members does not imply a lack of shared interest in community life. When one considers that the majority of South Umpqua residents feel a strong attachment to their community, do not want to see their children move away, find it to be attractive and are willing to cooperate with others to improve its overall appearance, and prefer a limited overall social interaction among its members, one receives the impression that the various communities provide a socially healthy environment in which to live. Preferences clearly are for an articulated community organization with greater degrees of preference for a reticulated pattern among stayers and relocatees.

Further indications of satisfaction with community life are that most respondents had no plans to leave the community. Of those few that did have such plans, most were due to employment or climatic conditions. Again, these few individuals planned to move within the year.

A significant number of people in each sample could not identify recent changes occurring at the community level: 15% of the downstreamers, 20% of the stayers, and 33% of the relocatees. Of the recognized changes, the stayer population noted the most specific, and the relocatees the most general. As with those noticed within various neighborhoods, specific changes referred to an increase in housing and/or a change in zoning regulations, and general changes referred to an increase in over-

all growth. Again, the stayers had the most diverse responses regarding recognized changes.

The relocatee population was the most satisfied with the way their community had changed, and the downstreamers, the least. Table 25 indicates the frequency of responses concerning feelings about recent changes in the community. Again, perception of least change correlates positively with community satisfaction.

TABLE 25  
SAMPLE AND FEELINGS ABOUT CHANGES: COMMUNITY, IN PERCENTAGE

| <u>Feelings about changes</u> | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|-------------------------------|----------------------|----------------|-------------------|
| As should be .....            | 41                   | 55             | 80                |
| Too slow .....                | 24                   | 15             | 6                 |
| Too fast .....                | 18                   | 15             | 11                |
| No response .....             | 17                   | 15             | 3                 |
| Total                         | 100<br>N=127         | 100<br>N=123   | 100<br>N=55       |

Note: The high no response figure is the result of the probe's ambiguity to many respondents.

Those feeling that community sponsored recreation was the most important were the downstreamers. The most frequent responses in all populations (over one-fourth) mentioned individual hunting and fishing as the most important types of recreation. There is an extremely low rate of recreational participation in community level activities.

The highest percentage of those indicating participation occurs among the relocatees, but here the frequency is only six percent.

Most of the persons within each population participated in individual recreational activities on an average of less than once a month. What can be hypothesized then is that while hunting and fishing are important to the residents of the South Umpqua area, they do not participate very often; availability of the recreation is an important factor in terms of the attractiveness of the area, however. The late summer season of the survey research might have altered respondent perceptions of their involvement. Both hunting and fishing are seasonal.

Interviews with long-time residents in both Days Creek and Tiller disclosed that interactions between these two communities were basically formal in nature -- they were either planned, the result of shared school systems, or they took the form of traditional annual rifle shooting matches. Any other interaction between the two was said to be individualized, infrequent and coincidental.

Residents living in only 1-3 towns as an adult (younger and middle age individuals) indicated that they came to the Umpqua because they simply liked the area. Residents having lived in 4-7 towns as an adult (middle aged and older persons) generally moved to the South Umpqua area for employment or economic purposes.

Some 16 % of the downstreamers, 25% of the stayers and 33% of the relocatees had noticed no recent changes taking place in the area. A significant number of residents in each sample indicated that the changes that had taken place were generalized increases in growth and

population; there were no significant notations of specific innovations taking place at the broader area level.

The relocatee population was once again the most satisfied with the changes they had recognized and the least perceptive of innovations. Contrasting with the neighborhood and community evaluations, it was the stayer population that was the least satisfied with changes in the area. The stayers also had the highest frequency of responses indicating that they felt things were changing too fast in the South Umpqua Basin. The following table is included to show frequency of responses concerning feelings about changes in the area.

TABLE 26  
SAMPLE AND FEELING ABOUT CHANGES: AREA, IN PERCENTAGE

| <u>Feeling about changes</u> | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|------------------------------|---------------------|---------------|------------------|
| As should be .....           | 45                  | 42            | 78               |
| Too slow .....               | 20                  | 13            | 4                |
| Too fast .....               | 20                  | 23            | 11               |
| No response .....            | 15                  | 22            | 7                |
| Total                        | 100<br>N=127        | 100<br>N=123  | 100<br>N=55      |

Note: The high no response figure is the result of the probe's ambiguity to many respondents.

Attitudes Toward Strangers in the Area. The majority of all respondents approved of strangers in the area to some extent. The downstreamers disapproved least frequently but also had the highest

frequency of those most cautious and uncertain. Table 27 is included to show range and frequency of responses concerning strangers.

TABLE 27  
SAMPLE AND FEELINGS ABOUT STRANGERS, IN PERCENTAGE

| <u>Feelings about strangers</u> | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|---------------------------------|----------------------|----------------|-------------------|
| Acceptance .....                | 69                   | 64             | 73                |
| Rejection .....                 | 9                    | 22             | 22                |
| Uncertain .....                 | 16                   | 9              | 5                 |
| No response .....               | 6                    | 5              | 0                 |
|                                 | 100                  | 100            | 100               |
| Total                           | N=127                | N=123          | N=55              |

Summary. Considering the variable previously discussed concerning territorial identities of residents in the South Umpqua Basin, certain trends and patterns emerge. As hypothesized, residents tend to delineate themselves both spatially and socially.

As a population, the downstreamers are the most satisfied with the way things are in the area, secondly with recent changes in the neighborhood, and are the least satisfied with their community. Things at the community level seem to be changing too slowly for more downstreamers than any other sample population. The same pattern holds for the neighborhood and area, although such responses are a little less frequent for these social units.

The stayer population seems to feel the most positive about recent

changes in the community first, the neighborhood second and the area least. For these peoples, things seem to be changing too slowly in the neighborhoods and too fast in the entire area. Those indicating that things were moving too slowly in neighborhoods are generally those with a college education, but these same college graduates also feel things are changing too fast in the entire South Umpqua area. They perceive a lag in upstream development and improvement.

Stayers having lived in only one to three towns as adults show the most diversity in their feelings about changes; they are the most satisfied with recent neighborhood alterations, but show feelings of a negative nature toward either too slow or too fast types of change. These people are second most satisfied with changes in the area but also have the highest frequency of responses indicating that at this level things are changing too fast. More mobile people (having lived in four to seven towns as adults) are satisfied more often with the way things are in the area.

The highest percentage of stayers have lived in from one to three towns in their adult life. They are the least willing of any group to accept strangers and indicate they are cautious of their presence. This, in part, can be attributed to a fairly low level of mobility. High mobility is usually correlated with the ability to accept elements of change. Overall, the stayers are the most diverse of all South Umpqua residents in their attitude toward change and tend to be more community oriented. They seem to exhibit insecure feelings about change in the South Umpqua Basin especially.

Relocatees who have resided in the upstream area from one to five years indicated that they were still newcomers. As a group, relocatees showed more satisfaction with their community than with their neighborhood or area. The newcomer (54%) and native factions (9%) especially expressed these sentiments.

Relocatee attitude toward growth could not be expressed in either positive or negative terms--they simply acknowledged that it was a natural occurrence. Growth trends, per se, were evaluated negatively. Of all populations sampled, the relocatees noticed the most change occurring and yet had the highest frequency of persons not able to detect recent changes in any of the spatial units. An hypothesis can be made that this sample population is more satisfied with community than the other sample areas. The occurrence of natural growth far outweighed that of population increase, perceptions of change were able to be voiced, a low frequency of change was observed, and the relocatees were the most satisfied of all populations with recent changes.

There is a feeling that things may be moving too slowly at the neighborhood and community levels, but a little too fast in the area.

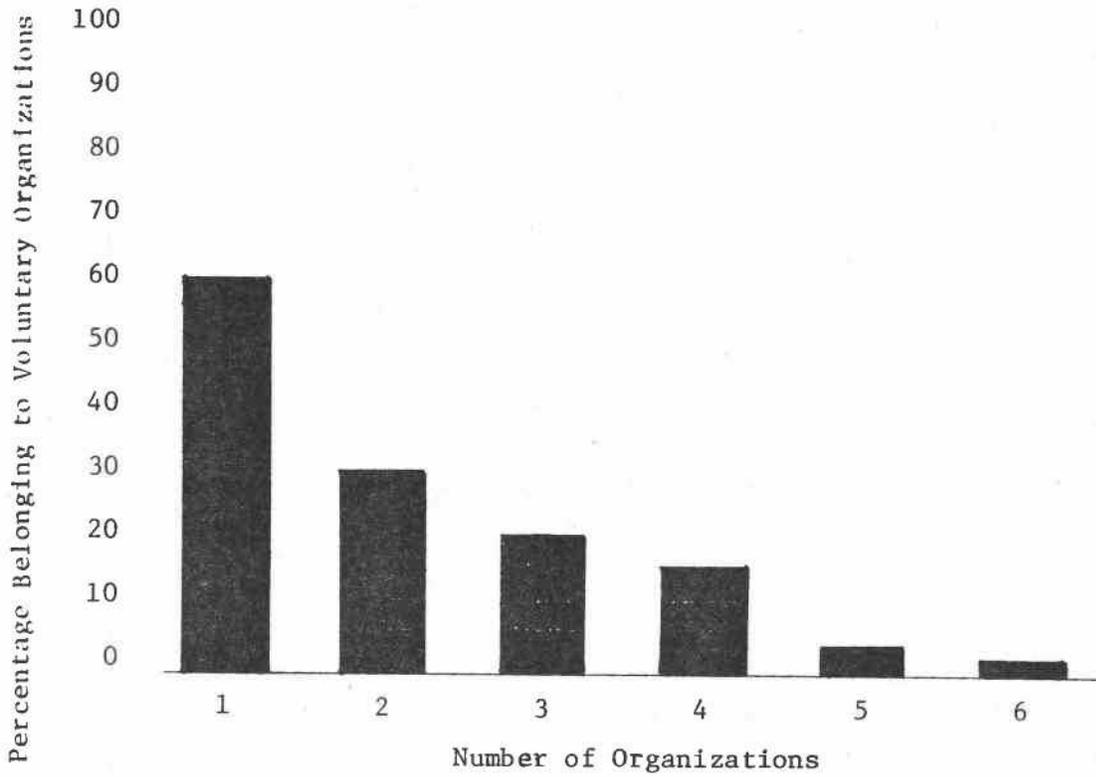
#### Organizational Preferences and Involvements

Voluntary associations can be used as one indicator of community structure and cohesion. In addition they can be used as indicators for various other social phenomena; for example, measurements for population integration into the community. South Umpqua residents are exposed to a myriad of voluntary organizations from which they can select membership. Downstream, in the larger communities, there are much greater numbers than in the upstream area.

This report does not isolate every organization by community and list the status of their current membership. It deals with these associations from the social survey and individual involvement. Although respondents were asked for the specific name of organizations that they belong to and the primary function they served, these responses were later collapsed into primary function categories only in order to make the data more manageable and intelligible. For example, if the respondent said he or she belonged to the Roseburg Concert Choral and it served as a social organization, its function rather than the organization itself was of interest for data analysis.

The following tables indicate the frequency of respondent membership in organizations.

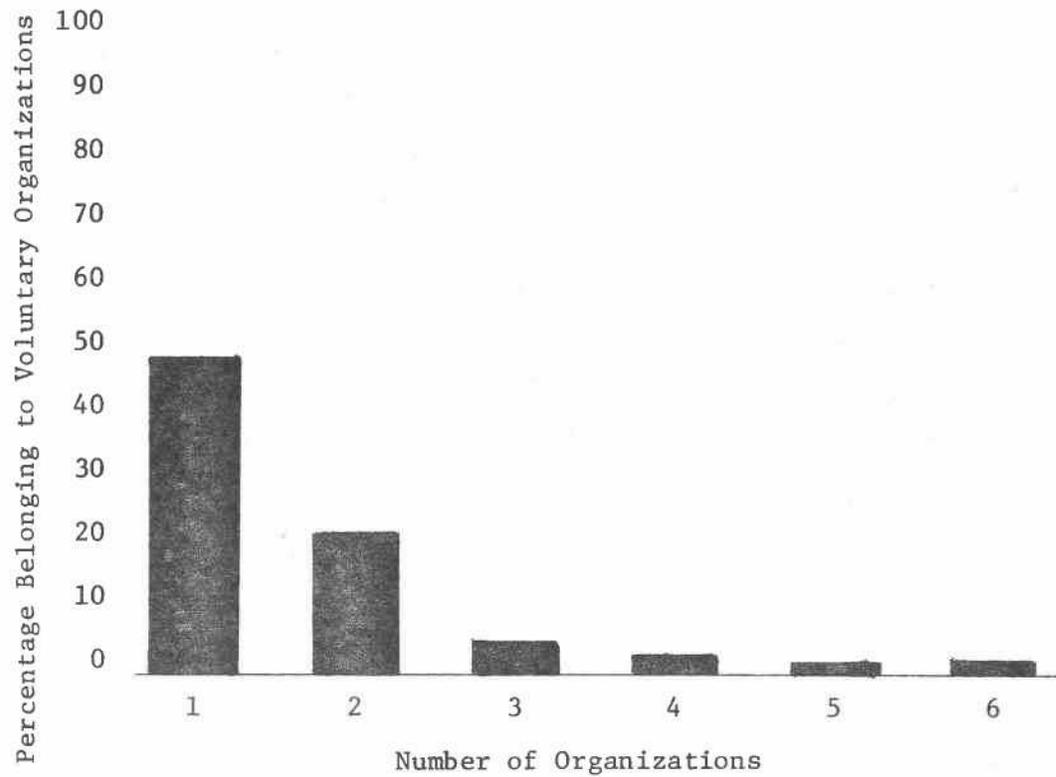
It is of interest to note that stayers and relocatees were less involved in membership than were the downstreamers. This may be, in part, due to the availability of organizations in the respective areas. The types of organization according to their function by sample area are depicted in Table 28 in terms of frequency of membership.



Note: 64% of population belonged to at least one organization.  
 30% of population belonged to at least two organizations.  
 19% of population belonged to at least three organizations.  
 15% of population belonged to at least four organizations.  
 2% of population belonged to five organizations.  
 1% of population belonged to six organizations.

The percentage belonging to no organizations can be determined by subtracting the percent belonging to only one organization from 100.

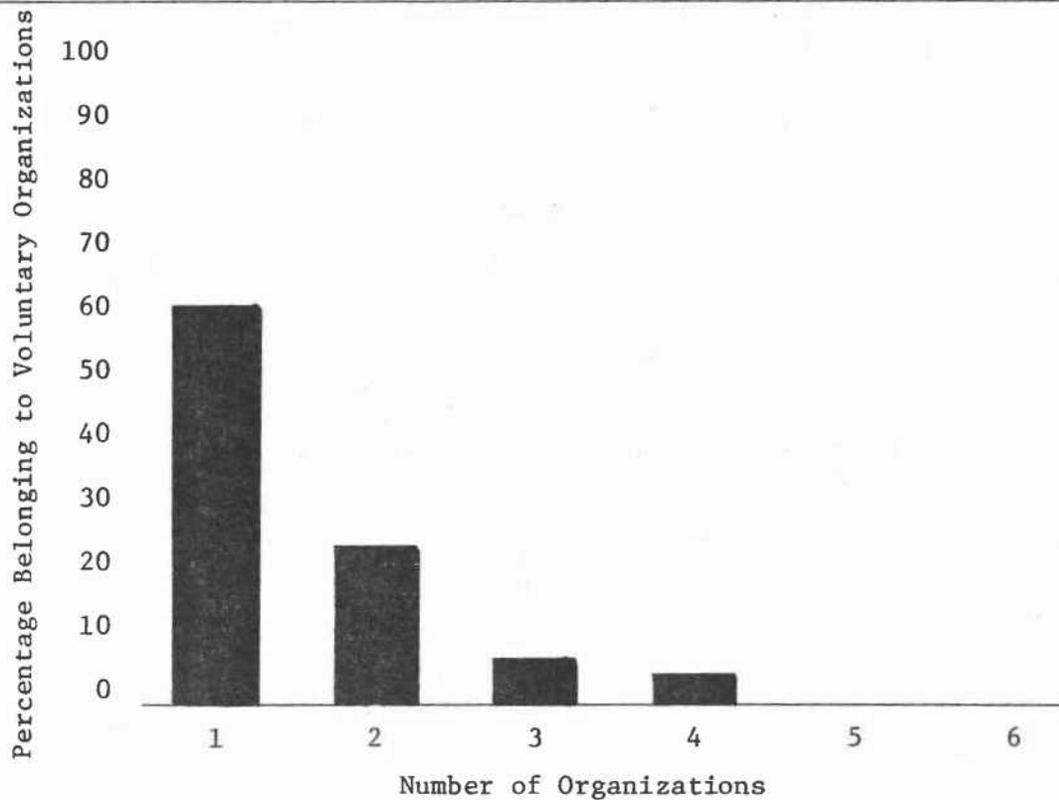
FIGURE 13. PERCENTAGE OF DOWNSTREAMERS INDICATING THEIR ORGANIZATION MEMBERSHIP



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Note: 47% of population belonged to at least one organization.  
20% of population belonged to at least two organizations.  
3% of population belonged to at least three organizations.  
1% of population belonged to at least four, five, and six organizations.

FIGURE 14. PERCENTAGE OF STAYERS INDICATING THEY BELONG TO AN ORGANIZATION



Note: 60% of population belonged to at least one organization.  
25% of population belonged to at least two organizations.  
4% of population belonged to at least three organizations.  
2% of population belonged to four organizations.  
No one belonged to more than four organizations.

FIGURE 15. PERCENTAGE OF RELOCATEES INDICATING THEIR ORGANIZATION MEMBERSHIP

As seen in Table 28, fraternal, social and religious organizations play the most important parts in the lives of South Umpqua residents. All others are of much lesser significance.

TABLE 28  
CATEGORY FUNCTION AND FREQUENCY OF MEMBERSHIP

| <u>Downstreamer</u>                 | <u>%</u> | <u>Stayer</u>                       | <u>%</u> | <u>Relocatee</u>                  | <u>%</u> |
|-------------------------------------|----------|-------------------------------------|----------|-----------------------------------|----------|
| Fraternal .....                     | 29       | Fraternal .....                     | 23       | Fraternal .....                   | 23       |
| Social .....                        | 25       | Social .....                        | 25       | Social .....                      | 16       |
| Religious .....                     | 18       | Religious .....                     | 23       | Religious .....                   | 34       |
| Community Service ..                | 8        | Community Service ...               | 8        | Community Service                 | 4        |
| Recreational .....                  | 8        | Recreational .....                  | 4        | Recreational ....                 | 0        |
| Trade and<br>Professional .....     | 5        | Trade and<br>Professional .....     | 8        | Trade and<br>Professional..       | 16       |
| Educational .....                   | 4        | Educational .....                   | 8        | Educational .....                 | 10       |
| Political .....                     | 4        | Political .....                     | 0        | Political .....                   | 0        |
| Environmental &<br>Historical ..... | 1        | Environmental &<br>Historical ..... | 1        | Environmental &<br>Historical ... | 2        |

In all actuality, residents of the South Umpqua are not wholesale joiners; it is interesting that data reveals that they are not attenders. Highest rates of attendance were among the relocatees, then downstreamers; stayers rarely attended organizations to which

they belonged.

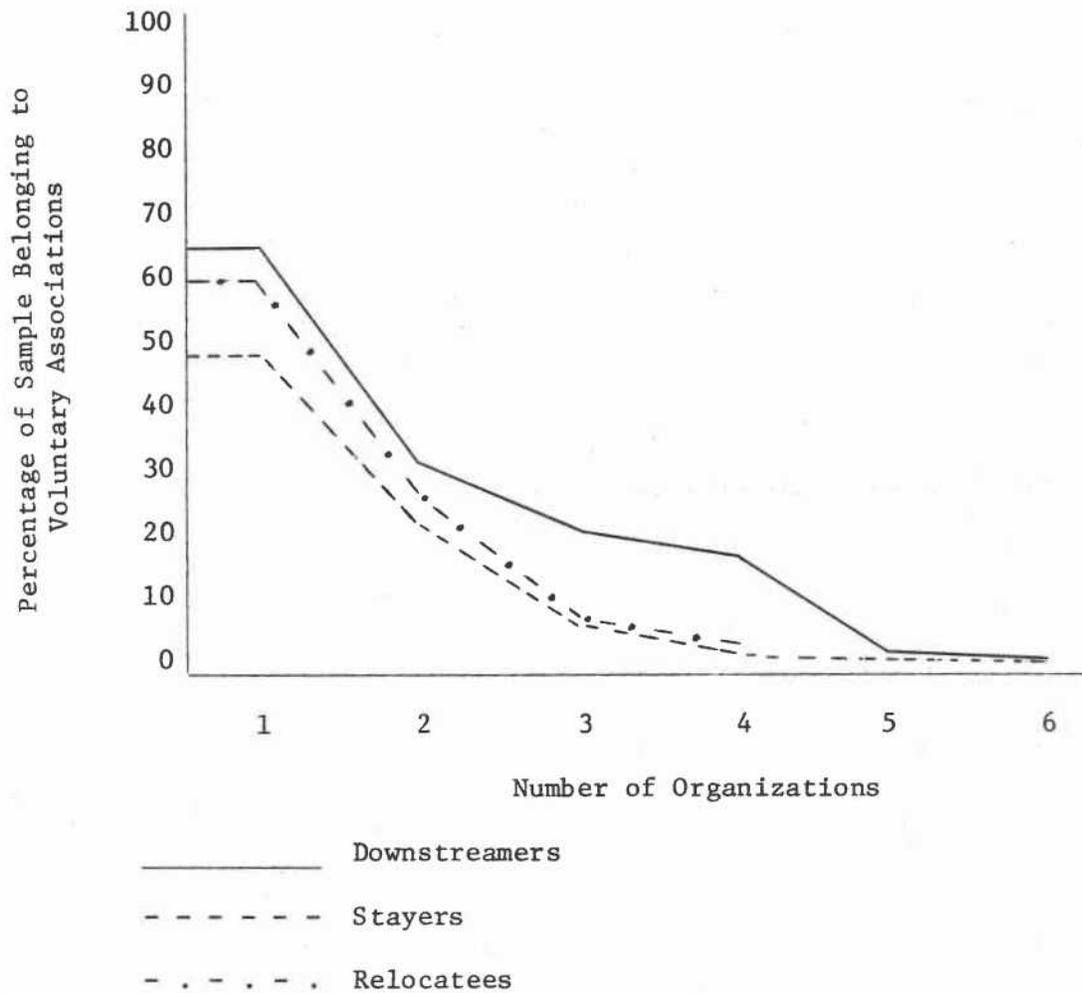


FIGURE 16. SAMPLE COMPOSITE OF ORGANIZATION MEMBERSHIP

### Education

South Umpqua residents show a wide range of educational backgrounds. One person had only three years of formal schooling while several had twenty-one years of schooling. The educational achievements

of people not only allude to the various lifestyles in various communities, but also suggest people's adaptability to social change in general. The following table shows the educational achievements of residents in the primary and secondary impact areas.

TABLE 29  
EDUCATIONAL, ATTAINMENT, IN PERCENTAGES

| <u>Level of Attainment</u>          | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|-------------------------------------|---------------------|---------------|------------------|
| Grade School . . . . .              | 10                  | 9             | 9                |
| Some High School . . . . .          | 16                  | 25            | 22               |
| High School Graduate . . . . .      | 35                  | 31            | 36               |
| Some College . . . . .              | 25                  | 21            | 18               |
| College Graduate Graduate . . . . . | 6                   | 5             | 4                |
| Post Graduate . . . . .             | <u>7</u>            | <u>8</u>      | <u>11</u>        |
| TOTAL                               | 100*<br>N=127       | 100*<br>N=123 | 100<br>N=55      |

As the table suggests, downstreamers show a slightly higher percentage of individuals who attended or graduated from colleges or universities, while relocatees had higher percentages graduating from high school and those who did post graduate college or university work. Stayers did not have the educational attainments of other groups by percentages.

TABLE 30

EDUCATIONAL ACHIEVEMENT COMPARISONS, IN PERCENTAGES:  
 SAMPLE, DOUGLAS COUNTY, AND STATE OF OREGON\*

| Level of Attainment  | Downstreamer | Stayer | Relocatee | Douglas<br>County | State of<br>Oregon |
|----------------------|--------------|--------|-----------|-------------------|--------------------|
| Grade School         | 8            | 8      | 9         | 25                | 21                 |
| Some High School     | 13           | 19     | 18        | 24                | 19                 |
| High School Graduate | 32           | 23     | 33        | 34                | 35                 |
| Some College         | 23           | 16     | 18        | 9                 | 13                 |
| College Graduate     | 10           | 12     | 15        | 8                 | 12                 |

\*Note: County and state data from 1970 Census. Census reports educational achievement for those age 25 and over. Sample was adjusted to illustrate a general comparison.

As shown in Table 33, the South Umpqua sample shows higher percentages of attainment than does Douglas County or the state, especially among those who indicated that they attended college. Categories were modified from Table 32 in order to correspond with census data. Stayers lagged behind other portions of the sample as well as the state and county in terms of high school graduates.

No really significant correlations occurred when education was correlated with other biographical data from the interviews. Generally, those less educated were older segments of the population; higher levels of education were mostly among those from twenty-five to thirty-four years of age. Sex correlations revealed some interesting data in terms

of the primary impact area as the following tables suggest.

TABLE 31  
EDUCATION AND SEX: STAYER

|                                | <u>Male</u> | <u>Female</u> |                 |
|--------------------------------|-------------|---------------|-----------------|
| Grade School . . . . .         | 5           | 4             |                 |
| Some High School . . . . .     | 9           | 15            |                 |
| High School Graduate . . . . . | 13          | 19            |                 |
| Some College . . . . .         | 8           | 14            |                 |
| College Graduate . . . . .     | 2           | 3             |                 |
| Post Graduate . . . . .        | 5           | 2             |                 |
| TOTAL                          | 42          | 57            | = 100*<br>N=123 |

TABLE 32  
EDUCATION AND SEX: RELOCATEE

|                                | <u>Male</u> | <u>Female</u> |               |
|--------------------------------|-------------|---------------|---------------|
| Grade School . . . . .         | 7           | 2             |               |
| Some High School . . . . .     | 18          | 7             |               |
| High School Graduate . . . . . | 15          | 19            |               |
| Some College . . . . .         | 7           | 11            |               |
| College Graduate . . . . .     | 2           | 2             |               |
| Post Graduate . . . . .        | 5           | 5             |               |
| TOTAL                          | 54          | 46            | = 100<br>N=55 |

Women respondents in the primary impact area showed higher percentages of educational achievement than did males, especially among the stayers.

Roseburg School District #4 presently has nine elementary, two junior highs and one senior high school. Enrollment is currently dropping and this trend, according to officials, is expected to continue. Personnel from the District Superintendent's Office explained that the largest single contributor to the present trend was the depressed labor situation in the lumber industry. Only larger schools, in terms of enrollment figures, show any degree of stabilization. Administrators for the district are presently considering a consolidation effort with schools of lowest enrollment. Actual closures are also being contemplated in conjunction with the consolidation measure. The Green District, in the south Roseburg rural area, has had a recent increase in enrollment figures due to new housing developments and also because it is in central locale for potential lumber employment (Interview: Roseburg School District #4 Superintendent's Office 1976).

The more southern portion of the central county, i.e. Tri-City, is served by South Umpqua School District #19. It has jurisdiction over schools in Myrtle Creek, Tri-City and Canyonville. It is quite a large district in terms of its spatial distribution. Boundaries begin to the north with Roberts Mountain and extend south to Canyon Mountain. The Cascade Range is the eastern boundary and on the west it more or less parallels the South Umpqua River. Growth statistics for this district are difficult to depict because many consolidations have taken place

since 1965. In 1965 Myrtle Creek and Canyonville High Schools relocated their students to the new South Umpqua High School facility at Tri-City. In a period from 1960-1965, all schools in this district experienced growth. The influx of population into this area, combined with a declining birth rate, have made enrollment fairly constant since 1970. A relatively high percentage of in-migration is impacting most heavily on grades 1 through 5, but is stabilizing in the higher grades (Interview: South Umpqua School District #19, Superintendent's Office, 1976).

In the upstream or primary impact area is located School District #15. Its boundaries extend from Canyonville Park on the west to Jackson County line to the east. North-south boundaries are the ridgelines above the small valley. There are two schools in the system, a grade school and high school combined at Days Creek and an elementary school in Tiller. The elementary schools can best handle any increased enrollment since the high school is presently taxed to its limits. There are 21 staff members in the district and enrollment since 1959 is shown below.

TABLE 33  
ENROLLMENT IN SCHOOL DISTRICT #15

| School                | 1959-60 | 1960-61 | 1964-65 | 1965-66 |
|-----------------------|---------|---------|---------|---------|
| Tiller Elementary     | 100     | 99      | 79      | 86      |
| Days Creek Elementary | 148     | 174     | 137     | 153     |
| Days Creek High       | 107     | 78      | 76      | 80      |

\*Note: In approximately 1966 Tiller grades 7 and 8 were relocated to facilities at Days Creek. Tiller, from 1966 to the present, has grades 1 through 6 only.

School budget expenditures in District #15 are nearly .5 million dollars annually and the district has never experienced difficulty in passing a school budget (Interview: School District #15 Superintendent's Office, 1975).

Milo Academy at Milo, Oregon, is the only of four schools of its kind in the state. It is a Seventh Day Adventists boarding school, grades nine to twelve, whose educational philosophy is in part based on a rural environment. The majority of the 250 currently enrolled students are from southern Oregon. Others come from various parts of the United States. Founded in 1955, the school has 29 full-time faculty and South Umpqua Seventh Day Adventist residents in the upstream area attend church services at the school's chapel. There are approximately 100 Adventists who would otherwise have to attend services in Canyonville. Tiller also has a church facility. It is non-denominational with a membership of approximately six individuals, although some 40-50 attend on an irregular basis. This church is currently in its 21st year.

#### Leisure Time and Recreation

Recreation is very important to the economy of Douglas County. The local, county, state and federal agencies provide a host of parks and other facilities for tourists as well as local residents. Currently there are some 6,000 acres in park land in the entire county. The following table gives the number of parks by sponsorship and the acreage involved.

TABLE 34  
PARKS IN DOUGLAS COUNTY

|                     | <u>Number of Parks</u> | <u>Acreage</u> |
|---------------------|------------------------|----------------|
| Federal . . . . .   | 64                     | 670.70         |
| State . . . . .     | 15                     | 3941.21        |
| County . . . . .    | 53                     | 1068.41        |
| Municipal . . . . . | <u>34</u>              | <u>258.09</u>  |
| TOTAL               | 166                    | 5938.41        |

(From State of Oregon: 1973)

These figures indicate that parks account for some .2% of the entire county lands or approximately .08 acres of park land for every county resident. The Douglas County Parks Department alone indicated an expenditure increase of over 50% in the total dollars spent for every existing park improvement and development of new recreational facilities from the 1967-68 fiscal year to the 1968-69 fiscal year. Besides county parks, there are some 38 boat ramps on the county's lakes and rivers, five swimming pools, four golf courses, one existing ski facility and one proposed, and two gun clubs (State of Oregon 1973: 56-61).

A very high percentage of South Umpqua residents utilize the Umpqua River Basin for their recreational pursuits. Downstreamers tended to be slightly more mobile and indicated they frequented other regions of the state just as often or more often than the local area.

The following table shows sample locations for recreational activities:

TABLE 35  
GEOGRAPHICAL LOCATION OF RECREATIONAL ACTIVITIES  
IN PERCENTAGES

| <u>Location</u>                | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|--------------------------------|---------------------|---------------|------------------|
| Umpqua River Basin . . . . .   | 35                  | 59            | 75               |
| Cascades . . . . .             | 4                   | 2             | 4                |
| Coast . . . . .                | 12                  | 8             | 4                |
| Eastern Oregon . . . . .       | 4                   | 1             | 0                |
| Willamette Valley . . . . .    | 1                   | 1             | 2                |
| Combination of Above . . . . . | 39                  | 21            | 15               |
| No Response . . . . .          | 6                   | 9             | 1                |
| TOTAL                          | 100*<br>N=127       | 100*<br>N=123 | 100*<br>N=55     |

Primary reasons given for the higher frequency of downstreamer recreational mobility is the lower rating that they gave existing facilities for recreational activities in the Umpqua. Only stayers and relocatees felt that the recreational advantages of the Umpqua suffice for their particular activity. As indicated previously, few park facilities, except federal ones, exist in the upper South Umpqua.

TABLE 36

SAMPLE AND RATING OF SOUTH UMPQUA RECREATIONAL FACILITIES  
IN PERCENTAGES

| <u>Rating</u>         | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|-----------------------|---------------------|---------------|------------------|
| Very High . . . . .   | 10                  | 21            | 40               |
| Average . . . . .     | 25                  | 42            | 33               |
| Very Low . . . . .    | 50                  | 28            | 18               |
| No Response . . . . . | 17                  | 10            | 9                |
|                       | TOTAL               | 100           | 100*             |
|                       | N=127               | N=123         | N=55             |

In examining biographical correlates of the attitudes expressed by the sample, no highly significant correlations emerged; those in the higher income groups tended to frequent the Umpqua and South Umpqua less often than others. Not only did they not frequent it as often, they also tended to give its facilities a lower rating. Newcomers and those in lower-age groups were most responsible for the high ratings and frequency of use.

Attitudes ranged dramatically on how the South Umpqua, in particular, could be improved in terms of its recreational potential. The majority of downstream users felt that water-related resource development was needed, such as flow augmentation and water stabilization. Stayers and relocatees, who used recreational facilities on the most frequent basis, suggested that existing facilities might be improved as well as new ones added. Overall, higher income groups favored water-related develop-

ments to improve the South Umpqua's recreation, while lower income and newcomer groups among stayer and relocatees were very adamant against the notion.

Most of the stayers and relocatees felt that the future of the South Umpqua depended upon it being carefully and selectively developed or left entirely alone. Newcomer groups were the highest advocates of these measures. Some downstreamers and stayers felt that a combined recreational and industrial development was a necessary feature of the planning for the South Umpqua's future. This was especially true among the older aged groups of respondents.

South Umpquans participated in a variety of recreational activities and tended to favor a combination of activities more than any one particular kind, as shown by the following table.

TABLE 37  
 MOST IMPORTANT INDIVIDUAL RECREATIONAL ACTIVITY  
 IN PERCENTAGES

| Type of Activity                    | Downstreamer | Stayer     | Relocatee |
|-------------------------------------|--------------|------------|-----------|
| Hunting and/or fishing . . . . .    | 17           | 26         | 29        |
| Swimming . . . . .                  | 2            | 2          | 6         |
| Boating . . . . .                   | 0            | 0          | 4         |
| Hiking and/or Backpacking . . . . . | 2            | 3          | 7         |
| Camping and/or Picnicking . . . . . | 6            | 2          | 4         |
| Community Sponsored . . . . .       | 3            | 4          | 6         |
| Combinations of Above . . . . .     | 36           | 32         | 18        |
| Other . . . . .                     | 21           | 21         | 7         |
| None . . . . .                      | 8            | 8          | 16        |
| No response . . . . .               | 5            | 3          | 4         |
| TOTAL                               | 100 N=127    | 100* N=123 | 100* N=55 |

Only relocatees selected hunting and fishing by the highest frequency of participation in any single activity. They were also more actively and frequently engaged in recreational activities than were stayers or downstreamers. Downstreamers did not participate as often as others and were more involved in combinations of recreational endeavors, as were stayers.

TABLE 38  
 FREQUENCY OF PARTICIPATION IN FAVORITE RECREATIONAL ACTIVITY  
 IN PERCENTAGES

| <u>Frequency</u>                | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|---------------------------------|---------------------|---------------|------------------|
| Less than once a month . . . .  | 22                  | 14            | 13               |
| 1-4 times a month . . . . .     | 33                  | 36            | 29               |
| 5 or more times a month . . . . | 35                  | 37            | 42               |
| No Response . . . . .           | 9                   | 14            | 15               |
| TOTAL                           | 100*<br>N=127       | 100*<br>N=123 | 100*<br>N=55     |

Income and length of residence proved to be the most important correlate of the present recreational pattern of South Umpqua residents. Higher income groups showed a wider margin or variety of recreational endeavors, tended to participate more frequently and engaged in their activities on more of a regional basis. The newcomers to the basin showed more involvement with the South Umpqua River and its recreational features. Newcomer recreational philosophy was expressed in terms of utilizing facilities of the South Umpqua while at the same time not

detracting from its natural environment.

Perceptions of Social Opportunities

Existing social opportunities are revealed in the previous section on membership and participation in voluntary organizations. The table below best illustrates attitudes in the primary impact area as to such opportunities.

TABLE 39

FOCI PERCEIVED TO BE ELEMENTS  
OF SOCIAL OPPORTUNITIES STRUCTURE, IN PERCENTAGES

|  | <u>Stayers</u> | <u>Relocatees</u> |
|--|----------------|-------------------|
| School-Related .....                       | 7              | 11                |
| Church-Related .....                       | 6              | 8                 |
| Clubs and Organizations .....              | 11             | 26                |
| Professional-Related .....                 | 15             | 8                 |
| Public Service and Community Affairs ..... | 10             | 3                 |
| Local Government Involvement .....         | 7              | 0                 |
| Anytime-Anywhere .....                     | 1              | 3                 |
| Small Community Recognition .....          | 15             | 34                |
| Combination of Above .....                 | 29             | 8                 |
| Total                                      | 100*<br>N=123  | 100*<br>N=55      |

Residents of the secondary impact area felt that voluntary associations were the best device for seeking social opportunities. What is of interest in the above data is that relocatees again illustrate

ties and orientations to the small community and to clubs and organizations. Relocates felt that by local community involvements they could gain community recognition.

Stayers showed more inclinations toward professionally related activities but, like relocates, were inclined toward small communities as well. Their lesser involvement in voluntary associations correlates with their lower recognition of this means of gaining social opportunity.

#### Relocation and Relocates

Relocatee attitudes toward the availability of adequate housing are more important than those expressed by downstreamers and stayers. They will be the ones who will be seeking other properties if the dam at Days Creek is constructed. Some relocates expressed a desire to remain in the upstream portion of the South Umpqua drainage, and at the same time also indicated there would not be adequate housing for them. Some suggested that many private and/or public lands be made available for persons displaced because of the reservoir.

The general consensus of people to be relocated is that there are no available lands for relocation in the immediate area. This lack of available housing is a stress-producing factor increasing people's apprehension over displacement. The social ties in the area do not exhibit a marked tendency toward social integration, but persons are emotionally tied to the area, be it for the natural beauty of the valley or the rural setting in which they reside. It is significant how many persons wish to relocate within Douglas County or the immediate area,

even though they know that there is a lack of housing to be purchased. The following table indicates preferences for relocation.

TABLE 40  
RELOCATION PREFERENCES

|                                   | <u>Number</u> |
|-----------------------------------|---------------|
| Douglas County .....              | 18            |
| Immediate Area .....              | 15            |
| Other Oregon .....                | 7             |
| Outside Oregon .....              | 2             |
| Other (includes Don't Know) ..... | 13            |
|                                   | N=55          |

This tie to the county can be viewed in the same manner as identification with place, but in a larger context. The Tennessee Valley Authority's records on migration patterns after forced relocation showed that of 14,400 families which were forced to move, over 76% relocated in the same county (Tennessee Valley Authority 1950:23). Drucker found this same trend operating in forced relocation in Kentucky. Thus anxieties over ties to the land or the county appear to produce greater stress than the possible disintergration of social organization.

A large majority of persons expect the federal government to do the moving for them, including finding suitable replaceable land. People seem to be at a loss in attempting to cope with the federal government and feel powerless in their situation. Many feel that if the government

can construct such a large project, then it has the necessary power to provide assistance to relocated persons, no matter what the cost.

#### Socio-Economic Characteristics

The majority of the people sampled owned their own homes and associated lots or lands. Ownership of additional lands was more common among relocatees than downstreamers or stayers. Nearly one-fourth of the relocatees indicated that they owned other properties which were located outside of the state of Oregon. Reasons for these out-of-state holdings were not determined, but this may be attributed to newcomers or relocatees purchasing land for possible settlement, or settlement if the dam at Days Creek were to come under construction, i.e., speculation. Relocatee sentiments against the dam, however, seem to negate a speculation motive. It is worth mentioning that only a small percentage indicated that they received any type of additional income from these other properties.

Additional property holdings of downstreamers were for the most part located in the central portion of the county, not in the upstream impact areas designed for inundation. This population also indicated that they received a very small amount of income from additional property holding. Stayers owned less additional property than did downstreamers or relocatees, but indicated they derived a higher percentage of income from these holdings.

Douglas County currently is experiencing a critical housing shortage that affects both immigrants and present residents. Some 43% of the county's homes have been defined as deteriorated or dilapidated

by the H.U.D. Area Economist.<sup>15</sup> The housing problem has not just been concocted by county agencies or residents--it is bona fide.

In 1970, there were 28,851 housing units in Douglas County, a 7% increase from the number available in 1960. During the same 10 year period the population increased by some 5%--thus leaving an insufficient 2% availability surplus. As a result, the selection of units available is limited and consumers are forced to accept houses which are either sub-standard or not suited for their needs. The shortage can be directly related to current inflationary prices (Johnson 1974:23) and the low availability of houses meeting acceptable measures of standardness.

Latest estimates and figures now show that this may be taking a reverse course. The number of building permits issued for incorporated areas in the county since the release of the 1970 population figures shows an overall increase in starts, but permits do not mean actual construction or that completion has taken place (cf. Johnson 1974). The following table represents the number of housing starts (1975) and the number of permits issued (1976) for the county and three selected communities in the central county.

Housing availability in stayer and relocatee areas is for all practical purposes the same. By county it is reported that sub-standard units are more common in rural than in urban areas (Johnson 1974:34). Information pertaining to the upstream area is non-existent, except in terms of respondent attitudes. Over 60% of the stayers and relocatees

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<sup>15</sup> Defined as crowding, excessive age, lack of complete plumbing and/or adequate heating (cf. Johnson 1974).

TABLE 41  
SAMPLE AND HOUSING

| <u>Number of Housing Starts</u> | <u>Single Dwelling/Permits</u> | <u>Multiple Dwelling/<br/>Permits</u> |
|---------------------------------|--------------------------------|---------------------------------------|
| Douglas County: 1975            | 242                            | 7                                     |
| 1976                            |                                | 3            6                        |
| Roseburg:        1975           | 59                             | 1                                     |
| 1976                            |                                | 3            6                        |
| Myrtle Creek:  1975             | 28                             | 6                                     |
| 1976                            |                                | none        none                      |
| Tri-City:        1975           | 18                             | 2                                     |
| 1976                            | 5                              | none        2                         |

Note: Data collected from county and city building inspectors on January 20, 1976. 1976 figures may be subject to change as of publication dates.

indicated that the availability of adequate housing was very poor in the upstream area.

In terms of housing construction and growth for the South Umpqua, Tri-City-Riddle, Myrtle Creek and Canyonville will share these distinctions. The Cow Creek area is currently zoned on the north bank for industrial expansion. Its north bank receives very little flood damage. The Days Creek area cannot withstand housing expansion because of limitations on water supply and sewage regulations. Days Creek currently does not have a community water supply or sewage system. The only water supply comes from shallow dry wells to the basic rock level, only some of which are successful in terms of drawing non-polluted water

from springs. These constitute a small portion of the water supply. The school at Days Creek uses a stream for drinking; water from the South Umpqua is used for toilets. The school has the only good water supply in the whole area (Interview: Environmental Sanitation Department 1975). The city of Canyonville does have a complete sewer system for proper waste disposal; however, it is currently expanding existing facilities.

Since the upper South Umpqua area uses subsurface water to dispose of waste and since shallow wells draw down surface water to be used for drinking and other purposes, contamination and pollution occur frequently and easily. It is suggested that rock layers limit permeation and natural filtration. In addition, the upstream area is not presently zoned for mobile homes and trailers. Currently there are problems in meeting county and state specifications for this type of housing expansion.

#### Farming and Irrigation

Douglas County agriculture shows a wide range of diversity. It is currently the leading producer of sheep and sheep-related products for the State of Oregon and projections show this trend to be on the increase for the future (State of Oregon 1971). Other important livestock commodities include hogs, cattle and poultry. Crops under cultivation include those classified as small grains (wheat, oats and barley). Hay production is currently on the increase. Pears, sweet cherries, plums and prunes are also being raised and harvested, along with filberts and walnuts. The following table depicts the growth of

selected Douglas County agricultural commodities in relation to the Willamette Valley and State of Oregon.

TABLE 42  
 AGRICULTURAL COMMODITIES IN DOUGLAS COUNTY, 1959-1969, IN PERCENTAGE

|  | <u>Douglas County</u> | <u>Willamette Valley</u> | <u>Oregon</u> |
|--|-----------------------|--------------------------|---------------|
| All Crops .....                          | +35.5                 | +23.4                    | +28.3         |
| All Tree Fruits<br>and Nuts .....        | -39.4                 | +25.6                    | +62.7         |
| Specialty Horti-<br>cultural Crops ..... | +63.3                 | +48.8                    | +45.2         |
| All Livestock .....                      | +47.4                 | +28.5                    | +38.3         |

Note: Percentages computed from data in "Agriculture in Oregon Counties: Farm Sales and General Characteristics", Special Report 330, Cooperative Extension Service, Oregon State University, Corvallis, Oregon, June, 1971.

Douglas County Extension agents have discovered no real significant changes in the last 20-30 years in farming or farming practices; only slight trends are beginning to occur, such as the loss of tree fruits and nuts and the increase of horticultural speciality crops. In relation to the Willamette Valley and the state, tree fruits and nuts have decreased by a significant proportion. This is largely attributed to a combination of decrease in market values in conjunction with urban sprawl. Even more meaningful is the fact that the amount of acreage available for tree fruit and nut production is extremely limited in the county. Although agents claim that the prune industry

has remained fairly static, apples, pears and walnuts have shown a marked decline in acreage.

The highest percentage of the South Umpqua sample were not involved in any type of farming activity, with the exception of the relocatees who were commonly involved (49%).

Downstream farming activities of sample members (10%) ranged from fruit and nut orchards to one sheep rancher who owned over 1,000 acres of land. Most small operators were primarily involved with subsistence agricultural activities, but they did market some produce locally. The size of stayer farms (26%) was approximately 250 acres per farm; only two indicated that they had holdings of more than 500 acres. Activities of stayer farmers ranged mostly in cattle raising, with some tree farming. Although relocatees indicated the highest number involved in farming activity, for the most part the size of the holding ran less than ten acres per farm. Some 12% of the relocatees lived on farms of 51 to 1,000 acres. No one owned a farm larger than 1,000 acres. Subsistence farming was the primary activity of relocatees, although cattle and horse ranching existed on the larger farms.

In conjunction with farming activities, there are currently some 15,000 to 20,000 acres of land being partially irrigated in the South Umpqua (Interview: Douglas County Agent 1975). All irrigation rights to the river are presently claimed and, to the best of their knowledge, agents said that no one is currently being charged a fee for irrigating other than the minimal annual filing fee.

Over-irrigation has been and continues to be a major problem in the South Umpqua. As a result, crop production is significantly reduced. County extension agents say that there is no real explanation for this phenomenon other than that "if a little water is good, then a whole lot is better!" Water utilization clinics are presently being contemplated with the hope of initiating conservation practices among those who will continue to irrigate.

In the sample most of those who indicated that they were involved with farming did not irrigate. The exception was among relocatees. Nearly 40% of those who farmed among the relocatees indicated that they practiced some method of irrigation, including that of gardening and for subsistence. This seems logical since their holdings closely border the rivers. Those who did not irrigate did not seem to want to add irrigation practices to their particular type of farming. This was also true among downstreamers and stayers. Primary reasons for not irrigating were because it was not needed or because it was not feasible in light of cost-benefit calculations. Most indicated they would not be willing to pay for irrigation even if more water were made available.

#### Occupation and Employment

The South Umpquans interviewed diverged slightly from the Douglas County occupational characteristics of 1970. Fewer processing occupations were found in the sample and slightly more construction work was found. The table that follows reveals data in comparison with Douglas County.

TABLE 43  
OCCUPATION BY SAMPLE, IN PERCENTAGES\*

| <u>In Labor Force**</u>                    | 1970-D.C. <sup>+</sup> | Downstreamer | Stayer | Relocatee |
|--|------------------------|--------------|--------|-----------|
| Professional, Managerial,<br>and Technical | 20                     | 27           | 20     | 19        |
| Self-employed                              | N/A                    | 3            | N/A    | 6         |
| Clerical and Sales                         | 18                     | 14           | 14     | 4         |
| Service                                    | 12                     | 8            | 12     | 6         |
| Farming, Fishing,<br>and Forestry Related  | 4                      | 4            | 10     | 8         |
| Processing                                 | 29                     | 18           | 17     | N/A       |
| Bench Work                                 | N/A                    | N/A          | 2      | 6         |
| Structural                                 | 3                      | 6            | 9      | 2         |
| Miscellaneous                              | N/A                    | 9            | 13     | 26        |
| Unemployed                                 | 8                      | 4            | 9      | 8         |
| <u>Not In Labor Force</u>                  |                        |              |        |           |
| Housewife                                  | N/A                    | 55           | 27     | 44        |
| Retired                                    | N/A                    | 25           | 27     | 42        |

Note: Refer to Table 14, Sample and Age. Percentage of relocatees indicating that they are retired is high because some individuals retire before age 65.

- \* This chart was compiled from sets of questions that were designed to determine the occupation of the informant as well as the informant's spouse, if applicable. Totals would be expected to total 200%; however, due to the high percentages of single, divorced, separated and widowed people interviewed, they do not.
- \*\* Processing includes occupations connected with the procession of wood, metal, food, petroleum, chemical, leather, textile and related products. Bench work is any occupation in fabrication, assembly and repair of metal, scientific, medical, photographic, jewelry, electrical, plastic, rubber, wood, glass, leather and textile products. Painting and decorating are also included. Miscellaneous are occupations in motor freight, transportation, packaging, extraction of minerals, logging, production and distribution of utilities, amusement, recreation, motion pictures and graphics.
- + Douglas County Data are interpolated for 1970 Census enumerations. N/A = not available in this table.

As indicated in Table 43, the percentage of housewives interviewed is quite high in relation to interviews with persons otherwise employed. This is especially true in the downstream and relocatee samples. Retirement also is quite high among relocatees, but this is not too surprising when one considers that the area holds a strong attraction for retirees. Only one retiree in the relocatee sample indicated that he was a native to the upstream area. Most individuals in the retired category indicated that they were relatively new to the area, that they had lived there for less than five years. Stayers, however, showed an interesting bifurcation with an equal amount of newcomers and natives retiring in this area. Downstreamers did not show any significant correlations with respect to length of residence and retirement status.

Those persons residing downstream had rather higher percentages of professional, managerial and technically related occupations. Processing and clerical and sales were also high labor force categories for downstreamers and stayers. This is understandable since this is the locus for the industrial base as well as the greater population. Relocatees, on the other hand, were sparsely employed in sales and none were employed in processing. Miscellaneous occupations were the largest category reported among relocatees. This is attributed to the amount of logging and related logging operations in the upstream area. While occupations of a professional, managerial and technical nature were also high for relocatees, such individuals, for the most part, were employed in many of the downstream communities, i.e., Roseburg, Myrtle Creek and Canyonville.

Most South Umpqua residents felt that presently existing employment opportunities were very poor. Correlations were run between levels of education among respondents and their sentiments toward these present employment conditions. Among stayers and downstreamers no significant correlations existed. Relocates with less education correlated with positive feelings about present job conditions. Further analysis revealed that these position responses came mostly from the retired segment of the sample. Retirees may have responded in this manner because most of them have been out of the labor force for some time and may not be aware of the current levels of competition for jobs in Douglas County.

#### Income and Affluence

The following table represents income distribution (1975) by sample in relation to Douglas County and the State of Oregon (1970).

South Umpqua residents revealed interesting data in terms of their own incomes in relation to Douglas County and the state.<sup>16</sup> Relationships to state and county low income groups, i.e., less than \$6,000 per year, show that relocates are at about par with county figures. Low income for the county is some 3% higher than state reported figures. Downstreamers and stayer categories show less low income than do either the state or Douglas County. Middle range income for the relocates is less frequent than reported for the state or county but this may be attributed to the 30% no response among this group. Towards the affluent end of the

<sup>16</sup> 30% of the relocates did not disclose their annual incomes to interviewers because of "personal reasons" and would not disclose to interviewers what exactly constituted personal reasons. This high no response percentage makes this sub-sample relatively difficult to interpret with any accuracy.

TABLE 44

HOUSEHOLD INCOME DISTRIBUTIONS: SAMPLES, DOUGLAS COUNTY AND OREGON,  
IN PERCENTAGES

|                      | Sample (1975)       |               |                  | Other (1970)          |                        |
|----------------------|---------------------|---------------|------------------|-----------------------|------------------------|
|                      | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> | <u>Douglas County</u> | <u>State of Oregon</u> |
| Less than 4,999 .... | 13                  | 19            | 16               | 21                    | 19                     |
| 5,000-7,999 .....    | 11                  | 11            | 15               | 23                    | 19                     |
| 8,000-9,999 .....    | 11                  | 13            | 7                | 16                    | 16                     |
| 10,000-14,999 .....  | 32                  | 30            | 20               | 26                    | 28                     |
| 15,000-24,999 .....  | 20                  | 15            | 4                | 11                    | 14                     |
| 25,000-49,999 .....  | 3                   | 3             | 4                | 2                     | 3                      |
| 50,000+ .....        | 4                   | 2             | 4                | 2                     | 1                      |
| No Response .....    | <u>6</u>            | <u>7</u>      | <u>30</u>        |                       |                        |
| Total                | 100<br>N=127        | 100<br>N=123  | 100<br>N=55      |                       |                        |

Note: Source for Douglas County and State of Oregon from "Characteristics of the Population", Vol. 1, Part 39, Oregon, 1970 Census of Population, United States Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, U.S. Government Printing Office, Washington, D.C.

of the scale, an income in excess of \$25,000 a year, South Umpqua residents showed significantly higher frequencies than those from other parts of the county and the state.

By sample distribution, relationships were examined between length of residence in the South Umpqua area and income levels. Relocates showed an interesting bifurcation. Low income levels were shared

by a newcomer element (less than five years residence) and by those native to the area. With higher incomes, a very similar circumstance occurs, although natives showed a slightly higher amount of relative income. Middle range incomes showed no significant correlations with length of residence.

Among stayers, those who were newcomers appear in every income category - from the lowest level of poverty to the most affluent. Those stayers reporting the highest amount of relative wealth were ones who had resided for more than 21 years in the area, or those who were native to the upstream area. Incomes of downstreamers as a group did not significantly correlate with length of residence.

#### Transportation

Our primary concern here is not with making a particular recommendation to improve the transportation system of the impact areas, rather our focus is directed towards present transportation patterns and the orientations of individuals in our sample. Our concern in the study of transportation was mainly how far South Umpqua residents travel to work and to commercial centers and the frequency of these movements.

Relocatees as a whole commuted farther distances to their places of employment than did others in the sample. As previously noted, many individuals residing in the upper portion of the South Umpqua commuted daily to as far as Roseburg for employment. Many of the round trips exceeded a hundred miles. By residing closer to the industrial base and to commercial centers, downstreamers and stayers commuted much less distance.

Individual or family frequency of travel to commercial centers for shopping activities directly correlated with the distance that they resided from these areas. Relocates, again, travel much greater distances for shopping but usually do not frequent such places more than once a month. Downstreamers and stayers tended to travel much shorter distances and made daily or bi-weekly visits.

#### Taxes

Taxes vary considerably in the South Umpqua area. Currently, the city of Roseburg has the highest tax base in the county at \$27.00 per \$1,000.00 assessed value. This base is partially attributable to the costs of maintaining public services. Tax rates in the upstream area are \$14.60 per \$1,000.00 assessed value. County industry accounts for some 16% of the total tax revenues (Interview: Douglas County Tax Assessors Office 1975).

Tax issues among South Umpqua residents varied markedly. These people do not differ from most citizens--they view taxes as too high. In this survey, most residents were not adamant about increasing taxes for public school support or for attracting new industry to their area. While most individuals did not object to tax monies being levied for school districts, they did take issue with the way districts spend such monies. They disapproved of spending increased taxes to rebuild downtown areas or to improve community services. Attitudes expressed toward the need of attracting new industry are not too surprising since the unemployment rate is quite high county-wide and much of Douglas County is classified as economic-depressed by state standards.

One interesting trend emerged among samples in the survey. Relocatees appeared slightly less favorable towards increasing tax dollars to support public schools, but were much more negative in their feelings than were downstreamers and stayers toward increasing tax levees in other categories. This can mostly be explained by the fact that relocatees feel they will lose their present social circumstance if the proposed dam is built, and they could not see any benefit in spending money to improve downstream areas unless they intended to relocate there.

#### Socio-Political Characteristics: Political Sentiments and Involvements

##### Structure of County and Local Government

Douglas County government serves an area of approximately 5,100 square miles and 4% of the state's population. Governmental structures range from highly formalized and elaborate systems at higher levels, to informal and highly personal systems in small towns. The seat of county government is located in Roseburg. Its structure is shown in the chart that follows.

In addition to its immediate governance responsibilities, the Douglas County government functions as an agent for the state and it is an advisory body to local governments within the county jurisdictions. Douglas County government has expanded due to general growth of size and scope of local government, which stems from a population shift from the city to the outlying areas of the rural environment. Although many county government activities have become supervised by the state, a 1958 legislative amendment loosened some of the constraints previously placed

TABLE 45

DOUGLAS COUNTY GOVERNMENT

ELECTORATE

T = Term  
S = Salary

Board of Commissioners

T. 4 years  
S. \$19,560.00  
3 Members

|                                      |                                    |  |  |  |                                      |                                     |                                  |                                     |
|--------------------------------------|------------------------------------|--|--|--|--------------------------------------|-------------------------------------|----------------------------------|-------------------------------------|
| Justice Courts<br>T. 6 yr.<br>S. *** | Sheriff<br>T. 4 yr.<br>S. \$17,736 | District Courts<br>T. 6 yr.<br>S. \$19,000<br>2 Judges | Circuit Court<br>T. 6 yr.<br>S. \$25,000<br>2 Judges | District Attorney<br>T. 4 yr.<br>S. \$16,996 | Treasurer<br>T. 4 yr.<br>S. \$16,092 | Assessor<br>T. 4 yr.<br>S. \$17,736 | Clerk<br>T. 4 yr.<br>S. \$16,896 | Surveyor<br>T. 4 yr.<br>S. \$17,736 |
| Tax Division                         | Jail Division                      | Emergency Operations Division                          | Criminal Division                                    | Budget Committee                             | Board of Equalization                | Election Division                   | Record Division                  |                                     |

NON ELECTED DEPARTMENTS

|                                 |                                     |  |   |                                 |                                 |                                      |                              |   |
|---------------------------------|-------------------------------------|--|---|---------------------------------|---------------------------------|--------------------------------------|------------------------------|---|
| Land Agent<br>S. \$14,940       | Juvenile Director<br>S. \$17,304    | Planning Director<br>S. \$10,592           | County Home Superintendent<br>S. \$16,896               | County Librarian<br>S. \$16,212 | Purchasing Agent<br>S. \$15,070 | Public Works Director<br>S. \$24,360 | Public Health<br>S. \$35,124 | Park & Recreation Director<br>S. \$16,896 |
| Veterans Officer<br>S. \$11,148 | Pitchford Boys Ranch<br>S. \$14,940 | Water Resources Coordinator<br>S. \$14,940 | Executive Director Council of Government<br>S. \$6,828* | Equip. Center Division          | F. Purchasing Division          | Family Service                       | Medical Investigation        | Sanitarian<br>S. \$15,312                 |

HEADS AND OFFICIALS

APPOINTED BOARDS AND COMMISSIONS

|                               |                     |                    |                              |            |                   |
|-------------------------------|---------------------|--------------------|------------------------------|------------|-------------------|
| Water Resources Advisory Com. | Planning Commission | Welfare Commission | Fair - Museum Advisory Board | Park Board | Dog Control Board |
|                               |                     |                    |                              |            |                   |

One Director heads both COG and Planning Commission

\* County Share

\*\* State Salaried

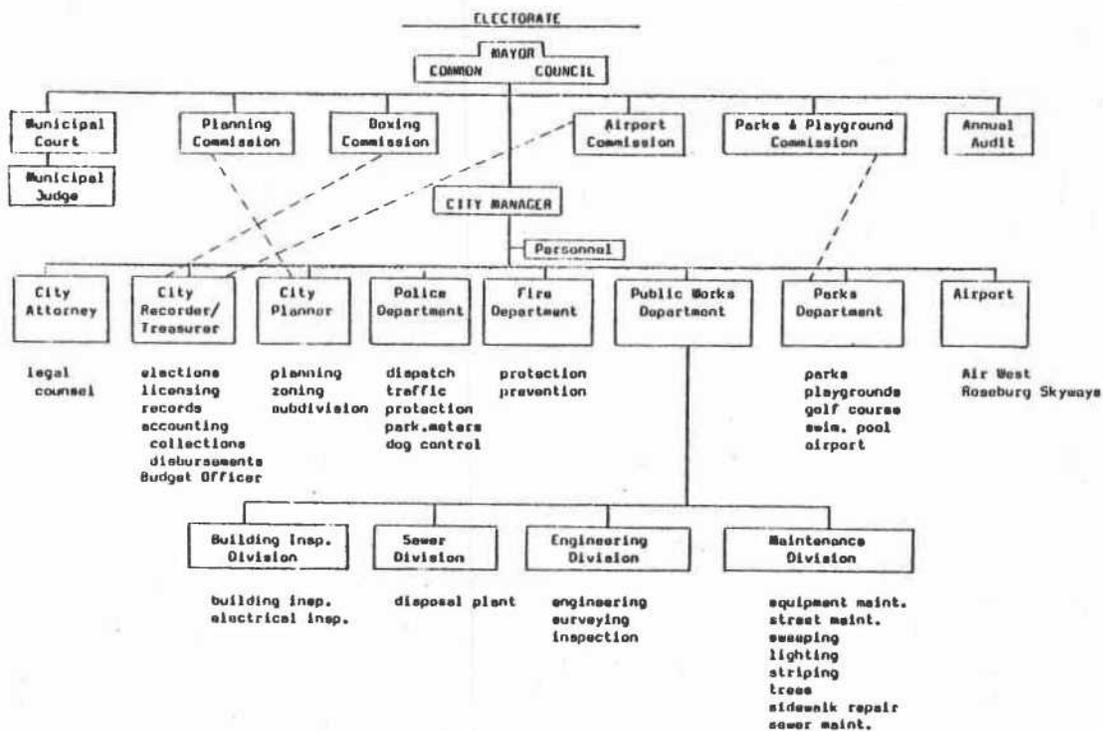
\*\*\*Paid by case load ratio

Note: After Roseburg League of Women Voters, 1975

on Oregon county government and afforded the county more freedom to meet local needs (Douglas County 1975:2-3).

Local community government in the South Umpqua is highly diversified, ranging from the most formally structured (Roseburg) to the unincorporated town (Days Creek), which has no formal governmental hierarchy per se. The local government in Roseburg serves nearly 24,000 people which includes individuals in the community's rural environs. It follows closely the standard city manager system. Table 46 depicts the structure.

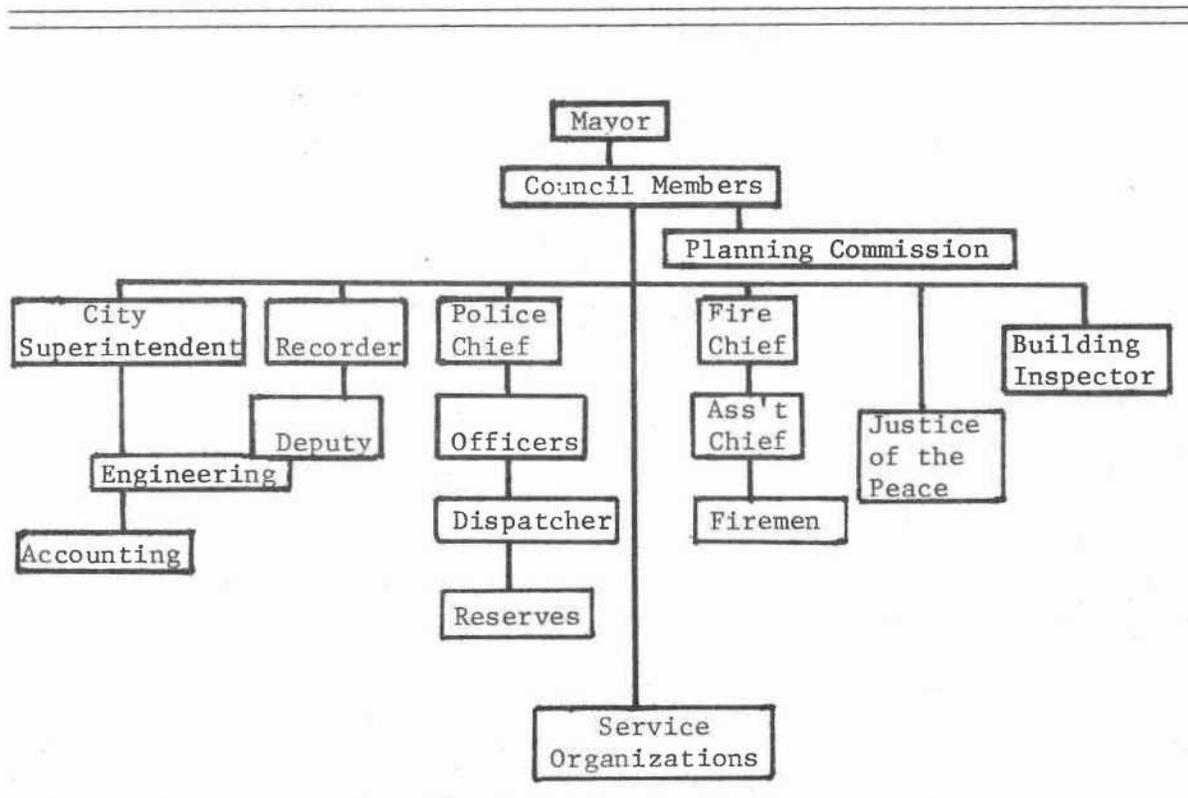
TABLE 46  
ROSEBURG CITY GOVERNMENT



In contrast with the formally structured government of the county and Roseburg is the pattern of other smaller towns.

Canyonville government represent a less formalized structure than that of Roseburg. Many of its officials participate on a volunteer basis rather than a full time fee paid position, for example the Fire Chief. The structure of Canyonville city government was compiled through information received at the city recorder's office.

TABLE 47  
CANYONVILLE CITY GOVERNMENT



Winston-Dillard, Myrtle Creek and Riddle are incorporated cities in the downstream area whose governments are similar in function and structure

to that of Roseburg. Days Creek, Milo, Tiller and Jackson Creek are unincorporated towns in the primary impact area and have no local, formal government (Interview: Douglas County Commissioners Office 1976).

#### Attitudes Toward Government

Most people felt that their local government was at least doing an adequate job in serving them and meeting their needs. Among the downstream communities many individuals admitted that while they rated their government as doing the kind of job that they expected it should do, they really did not think they could evaluate the performance of many of the elected or appointed officials, such as the mayor or city manager, since they did not have precise knowledge of their actions. Exact reasons for this uncertainty or inability were not determined, but it suggests that few people have either the inclination or the access to information on the real actions within the city and county government. What was surprising was that respondents were not blindly critical of local and county government officials.

South Umpqua residents agreed that local politicians were trustworthy and working in the communities' best interests. The local and county political leadership in Roseburg has indicated it is in high favor of the Days Creek Dam being built for reasons already discussed in an earlier section. Relocatees generally viewed this political element as deceitful and profiteering. Generally, however, governments geographically less removed were not necessarily looked upon in this manner, even though sentiments in favor of the dam existed overtly at governmental echelons in most communities. Some government

officials and planners interviewed in Roseburg said they viewed people in the primary impact area who were against the dam as a "necessary evil." One official stated that residents of that area are not a very important part of our county. Most indicated that their small numbers did not justify holding up county development.

Individual attitudes on being able to exert influence upon the decision-making capabilities of the various levels of government, i.e., local, county, state and federal, did not vary according to different samples. The majority of each felt that there was little they could do to exert such influence. As was expected, and indicated in other communities, the farther removed the form of government, the less influence people felt they had on the decision-making process.

#### Perceptions of Political Opportunities

The majority of South Umpqua residents felt that there were good to excellent opportunities for them to participate in political affairs. By their own admission, however, they are not very active politically. Even in daily conversations they indicated that very rarely would politics be a topic of conversation with friends, relatives, neighbors or fellow workers.

Over 75% of the people interviewed in the South Umpqua had never participated actively for any political party. Less than 4% had ever held a political office. The following table indicates their political party preference.

TABLE 48  
POLITICAL PARTY PREFERENCE  
IN PERCENTAGES

|                   | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|-------------------|---------------------|---------------|------------------|
| Republican .....  | 21                  | 16            | 27               |
| Democrat .....    | 44                  | 45            | 37               |
| Independent ..... | 17                  | 21            | 29               |
| Other .....       | 7                   | 10            | 7                |

Note: Other includes membership in such political organizations as the John Birch Society. Responses do not total 100% due to deletion of no response items.

#### Services and Facilities

The various services and facilities provided to the residents of the South Umpqua are most immediately available to downstreamers. These come in terms of family planning and counseling, welfare, employment, law enforcement, health care, fire protection, etc. People upstream, that is from Canyonville to Jackson Creek, do not have immediate access to such a variety of services simply because of their lack of proximity. Of all services provided, perhaps the most critical are the emergency services designated as law enforcement, health care and fire protection.

Law Enforcement. The sample area is served by various law enforcement agencies which include the city police, the sheriff's department and the Oregon State police. Roseburg, Winston, Myrtle Creek and Canyonville all have city police forces. East of Canyonville no bona fide law enforcement bodies exist whatsoever. The town of

Drew, for example, has one self-appointed deputy. Of those residents interviewed near Drew, most said that this person is ignored in his law enforcement role.

The Douglas County Sheriff's Department is responsible for patrolling the environs east of Canyonville. On occasion it is patrolled by State Police as well. The Sheriff's Department says it can only patrol this area on a less than regular basis because of a shortage of personnel which is felt county-wide.

Most police agencies in the South Umpqua do not differ greatly in experiencing the same difficulties felt by others throughout the country. There are man-power shortages, costs associated with replacing equipment, and the need for facility expansion, among others. While the Douglas County Sheriff's Department is currently building a new jail and office facilities, the City of Canyonville has had their facility condemned, thus requiring a costly transportation of prisoners to Roseburg for restraint or confinement. Canyonville has also experienced its fair share of internal problems in the past year, especially among its law enforcement units.

Fire Protection. Most of the South Umpqua has adequate fire protection facilities for serving residences within city limit boundaries, even if the activity is carried on by volunteers. Canyonville does not have full-time paid fire fighting personnel. Firefighters, including the chief, respond on strictly a volunteer basis.

Fire protection for homes and businesses east of Canyonville to Jackson Creek and Drew is quite limited. Volunteer departments do

exist at Days Creek and Drew, but they have a very limited equipment inventory. The Forest Service at Tiller does have equipment for fire protection, but this is used primarily for fires on government lands. The Douglas Forest Protective Association (D.F.P.A.) is the primary fire protective body in this area. The D.F.P.A. does not provide protection for communities during non-fire seasons (seasons with low potential, e.g. winter months). The association will, however, respond to residential or other fires if it appears forest lands are endangered (Interview: Douglas Fire Protection Association 1975).

Health Care Facilities. Currently Roseburg has two hospitals with a total bed capacity of 203. One facility is undergoing expansion. Myrtle Creek has one hospital with a twenty bed capacity. The downstream area is also served by a county health office in Roseburg.

The region from Canyonville to Jackson Creek and Drew only has immediate access to a 22-bed hospital in Canyonville (State of Oregon 1974:42). Interviews with health planners from the Umpqua Regional Council of Governments indicates that it is not actually an economically viable hospital in terms of benefit-cost analysis. The hospital staff is under-utilized, while its out-patient service is over-utilized.

#### Major Political Issues in the South Umpqua Basin

Determining what issues or topics are of major concern to South Umpqua residents is not a difficult research problem. For our own

purposes we looked at major issues over the last ten years. Data were derived from local newspapers and from interviews with local residents. Particular attention was devoted to those issues dealing with water resources, energy and other developmental-oriented projects.

The year 1974 was chosen as a baseline in order for relating and discussing some of these general community and county issues. In the upstream area at Days Creek there was a dispute over water rights to portions of that particular feeder stream to the South Umpqua River. This particular problem resulted in damming to sustain fish life vs. irrigation rights for those utilizing the flows for that purpose (cf. Roseburg News Review August 17, 1975). Another issue involved the provision of enough water during low-flow periods for fire protection. During the summer, the low flow of the South Umpqua River always becomes a re-emerging issue. In the fall months people are concerned over the potential flooding that exists on the lower portion of the central valley (cf. News Review August 13, 1975; & October 4, 1975).

In the relocatee region east of Days Creek to Jackson Creek, the threat of the dam is a constant issue and topic of conversation as revealed through interviews in the area. Few people have been flooded in this region and high river flows are not a major issue. The low flow of the river in summer is a much-discussed topic but there is presently no serious water shortage in the area. Lack of law enforcement is another major issue for the area because people believe more police would cut down automobile accidents and curtail the high degree of

equipment theft in the region. Within the town of Canyonville, the police department and its internal organization was another topic which had a diverse effect on the community.

Major issues dealing with water resource development and related topics ranged from a new water system for the city of Glendale, the downgrading of the Roseburg city system by the Environmental Protection Agency, to issues on the proposed Days Creek Reservoir. One very good example of the developmentalist-environmentalist dichotomy in water development projects was initiating action to get the North Umpqua River, from Winchester Dam to Idlewild, classified within the Scenic Waterways Act. The study met opposition from local realtors who foresaw the housing and related development that exists adjacent to the river. The Days Creek Dam issue also took an interesting political twist during 1974 in terms of gaining importance. The approval to include the project into the Rivers and Harbors Authorization Bill met strong opposition from environmental groups throughout the state and county. Early in the year the proposed dam itself was viewed as a critical asset, especially by several legislators. Later in the year, however, legislators who had been supporting the proposition began to withdraw requests for funds that were to be applied to advance planning studies. Support became redirected towards conducting studies on the feasibility for a small dam at Galesville on Cow Creek, a tributary of the South Umpqua River.

Power has also been a key issue, and remains so to this day.

A new Office of Economic Development was opened early in 1974. Located in Medford, part of its responsibilities were to explore the possible development of new power sources in various southern Oregon counties, including Douglas. Pacific Power and Light Company also attempted to alleviate the county power needs by trying to determine the feasibility of building a nuclear power reactor some 15 miles northeast of Roseburg. The study met with formidable resistance from area residents. Interviews with personnel at the Roseburg office of Pacific Power and Light Company revealed that local citizen elements were very well organized against the site and quite literally picketed their office.

Other energy resources to be explored on a non-systematic basis are gas and oil reserves. Although no significant geologic discoveries have been made, exploration does continue on a less than regular basis. It has been determined that geothermal resources do not exist in the county (Interview: Douglas County Commissioners Office 1976).

### Image and Environment

#### Self-Assessment of Environmental Awareness

Most South Umpqua residents rated themselves as being fairly knowledgeable on environmental issues. Interestingly enough, those who rated themselves as highly knowledgeable were not necessarily those who were actively engaged in working to solve such problems. Those who assessed themselves as being less knowledgeable were the most active participants in attempting to work for solutions to many environmental problems. In addition, people from higher income groups

tended to be slightly more active than others, especially the housewife element of upper economic groups.

#### Environmental Activities and Orientation

As mentioned earlier, South Umpqua residents are not an active population in participating to solve problems of an environmental nature. Membership in environmentalist groups is quite low, at least by sample (See section on voluntary organizations, Table 28). Stayer and relocatees were slightly more involved than were the downstreamers, but not significantly.

The organization most active in the study area in opposition to the dam at Days Creek is the "People Against the Days Creek Dam Committee." This group, organized by newcomers to the upstream area, considers itself to be a last-ditch effort to prevent construction of the reservoir. Apparently groups previously were not well enough organized to stall the project. Membership is not necessarily formalized, but attendance at the first meeting ran in excess of 100 people. Groups such as this are not unique to the process of water resource development.

Two main bodies exist as proponents for the construction of the reservoir at Days Creek: the Umpqua Watershed Resource Development Association (UWRDA) and the ad hoc Dams for Dams Committee. The UWRDA is not a government entity, but rather a private group of nearly 1,000 county residents. UWRDA acts as an association of associations, drawing membership chiefly from service organizations, industry and other concerns. They primarily back select developments. Their primary concern

is alleviation of flooding and augmenting summer water levels (Interview: UWRDA 1976). They are composed of industrialists and individuals from other professional endeavors (Interview: Douglas County Commissioners Office 1976).

In addition to the environmentalist and developmentalist factions in the county, historical preservationists are also operating in a formal way. The Douglas County Historical Society, headquartered in Roseburg, has some 250 members throughout the county and state. They publish a quarterly journal entitled the Umpqua Trapper which attempts to capsule and reiterate the historical significance of Douglas County. The society is responsible for organizing all county events with historical overtones.

In Canyonville, the South Umpqua Historical Society draws some 300 members from the local area who meet annually to celebrate "Pioneer Days" in the South Umpqua. Pioneer Days in the South Umpqua, their annual journal, focuses entirely on the history of the South Umpqua region. This group was organized in hopes of eventually constructing a museum at Canyonville to display and recreate the history of this area (Interview: Secretary of the South Umpqua Historical Society 1976).

In no way connected with any of the historical societies, the Douglas County Museum is a large contributor to the history of the county. The museum is located in Roseburg, with a small branch at Reedsport. Some 27,000 people frequent the museum each year and attendance is on the increase. This institution is funded by the County (Interview: Director of Douglas County Museum 1976).

Attempts are being made by individuals in some of the communities to recreate and display the history of their particular areas, for example, the homespun museum at Drew.

#### Use of the Rivers: People's Preferences

Attitudes toward how man should intercede in the water resources of the South Umpqua did not differ in a significant manner among its residents. Most people felt that man was a developer who does have a right to interfere with the natural flow of waters in order to put them to some beneficial use. Most of the younger age groups, however, felt that man should exercise extreme caution not to commit an irreversible act.

Residents also felt a concern for wanting to see that the natural beauty and environment be maintained. If developed, they thought it should be done in a careful and selective way. Only some stayers expressed that industry could enter into development along with recreation, thus projecting a sentiment that a harmonious relationship can exist between two factions that do not necessarily have coincident interests. Relocatees especially felt that the river should be entirely left alone.

#### Land Use Patterns and Plans

Much of the information on the land use patterns and plans of the primary and secondary impact areas of study were abstracted by interviews with personnel from the Douglas County Planning Department

in Roseburg and other pertinent agencies who, in some way, input to the planning process. The existing general development plan for Douglas County does not meet the 1973 legislative requirements of Senate Bill 100, and plans are now being considered for a comprehensive plan that will meet these requirements. This endeavor will take approximately five years. It seems to be desperately needed since the current developmental plan is inadequate as determined by the Land Conservation and Development Commission (L.C.D.C.).

The county planning department also intends to reorganize its Citizens Advisory Districts. The first step would be to expand them from the existing eleven to nineteen districts. Planners of the county felt that this initial step would afford better citizen coverage of county problems, as in the North Umpqua District. This district is currently plagued by the developmentalist-environmentalist faction. It should be noted that the Citizen Advisory Committees are formulated by county appointment rather than by election.

Planners informed us that approximately one year ago the county commissioners mailed out questionnaires to residents of the county. Approximately 20% of those mailed were returned. The respondents then became potential candidates to the Citizen Advisory Committee. It is currently thought that only four committees would be simultaneously addressing the problem of comprehensive plan formation. Others will not be activated.

The philosophy of the Douglas County Planning Department is generally one of "open-space" and preservation of agricultural lands.

Planners indicated they did not presently intend to seek alternate methods of land use regulations, but rather to stay with traditional zoning. In fact, they stated that any alternate methods such as those based upon a multiple use or trade-off philosophy are applicable to metropolitan areas. Such methods were not seen as adapting to more rural environs. The county has been completely zoned since 1973. Planners did recognize the need for revisions, however.

With the exception of the town of Riddle, the county has no urban growth plans. Planners in Riddle felt that urban growth boundaries represented a potential problem in terms of any future county growth.

Douglas County planners are not actively engaged in planning on the proposed dam at Days Creek. They said that the new comprehensive plan will include the proposed project, but only in a general way. If the dam became a reality, then they would initiate an alternate study to supplement the new comprehensive plan for the county.

#### Quality of Life

Quality of life and social well-being are difficult to quantify in terms of any significant data other than through individual attitudes or preferences. The quality of life includes measures of social well-being and happiness; it is a subjective measurement of individual satisfaction with his position in a cultural-environmental relationship. Social well-being is more of an objective measurement in which observations are made as to people's income, physical and mental

health, nutrition, education and so on (cf. Smith 1973).<sup>17</sup>

Observations to be assigned to social well-being criteria are usually decided by research designers. Quality of life is more subjective and it is assessed by a person's experience and the orientation of his or her life style.

Most South Umpqua residents felt that their current life-style was best suited for their tastes and needs. Relocates especially expressed this in terms of their particular satisfaction with the upstream environment where they reside. All South Umpqua residents indicated general satisfaction with their quality of life in terms of their particular niche. Quality of life and social well-being, they felt, came in terms of their own efforts and achievements.

#### Water Resources: Attitudes, Experiences, and Expectations

##### General Attitudes

Attitudes toward water resource developments varied quite dramatically between the three sample populations. Downstreamers and stayers in most instances clustered in similar categories and tended to have more developmentalist attitudes. Relocates, as a group, viewed development in more negative terms. In only a very few cases did all three samples concur in precise developmentalist attitudes, for example, a need for flood control.

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<sup>17</sup>We are taking semantic issue with Smith's designations of these two concepts. We would prefer a reversed definition and have offered one based on his original distinctions. His presumption of a dichotomy between them is quite essential and is maintained here.

The following represents general attitudes by sample towards water resource development.

TABLE 49  
SAMPLE AND ATTITUDES TOWARD WATER RESOURCE DEVELOPMENT  
IN PERCENTAGES

|  | <u>Downstreamer</u> |                 | <u>Stayer</u> |                 | <u>Relocatee</u> |                 |
|--|---------------------|-----------------|---------------|-----------------|------------------|-----------------|
|  | <u>Agree</u>        | <u>Disagree</u> | <u>Agree</u>  | <u>Disagree</u> | <u>Agree</u>     | <u>Disagree</u> |
| More dams are being built than are necessary .....                     | 20                  | 58              | 27            | 44              | 44               | 26              |
| Water Resource Developments change areas .....                         | 83                  | 5               | 88            | 6               | 89               | 5               |
| Money spent on reservoirs exceeds benefits .....                       | 31                  | 50              | 36            | 51              | 64               | 16              |
| Reservoirs flood lands that are worth more than the reservoir .....    | 23                  | 52              | 41            | 44              | 56               | 27              |
| The rise in land values will make-up for the amount of land lost ..... | 54                  | 24              | 41            | 39              | 18               | 66              |
| Flood control projects always help people .....                        | 66                  | 18              | 47            | 39              | 25               | 55              |
| Reservoirs should not take peoples' homes .....                        | 31                  | 57              | 36            | 57              | 53               | 39              |
| It is foolish to give up good land to the reservoir ...                | 21                  | 35              | 37            | 56              | 56               | 29              |
| Reservoirs are a good investment .....                                 | 84                  | 6               | 72            | 17              | 49               | 26              |
| Reservoirs nearly always improve areas in which they are built .....   | 68                  | 13              | 60            | 31              | 35               | 51              |
| Reservoirs may break up families .....                                 | 21                  | 54              | 34            | 53              | 55               | 31              |

Note: Totals do not equal 100% because of the deletion of no response items.

These responses depict the downstream and stayer population in their aforementioned affirmative clusters. While all samples agreed that water resource developments do change areas in which they are built, only the relocatee population viewed most of these changes in negative terms. Relocatees felt that while reservoirs may in general be a good investment, this is not so in the case of Days Creek. The following table represents this sentiment.

TABLE 50  
ATTITUDES TOWARD THE CONSTRUCTION OF DAYS CREEK DAM  
IN PERCENTAGES

|                   | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|-------------------|---------------------|---------------|------------------|
| Favor .....       | 60                  | 52            | 11               |
| Disfavor .....    | 9                   | 36            | 78               |
| No Response ..... | 31                  | 12            | 11               |

#### Their Own Experiences

For the most part, people in the designated samples had not experienced any significant degree of water resource related catastrophe or had severe water-related environmental limitations imposed upon them. One would expect, for example, that some correlation would emerge between the respondents' geographical location downstream from Jackson Creek and the number of instances or experiences with flood related problems. This was not the case. Only 20% of the relocatees, 18% of the stayers and 20% of the downstreamers had indicated such experiences.

One might expect to find a somewhat higher incidence of flooding in the downstream sample.

Those people indicating experience with flooding in the South Umpqua area acknowledged that the South Umpqua River, rather than any of its tributaries, had been chiefly responsible for any damage. Damage in monetary values to either residence or place of business showed a wide variation in actual figures. Generally, for those who had such experience, the most frequent response to damage was in the neighborhood of \$1,000 to \$15,000 dollars, although one figure was over \$60,000. As was estimated, the stated monetary value of losses connected with flooding was higher downstream than among stayer or relocatee populations. The latter two groups averaged less than \$1,000 in reported damage.

Other catastrophic situations or limitations, such as experiences with drought, contaminated water or electrical shortages (not outages), were practically non-existent.

#### Awareness of the Days Creek Project

The majority of sample respondents indicated that they were aware of the plan to build the reservoir at Days Creek. Highest awareness, as expected, was among the relocatees. Downstreamers indicated slightly less familiarity with the project than did others. Forms of mass media, i.e., television, radio and newspapers, were designated as the chief disseminating sources of information about the proposed project. Almost one-fourth of the relocatees, however, said

they had been contacted by the Corps of Engineers in some manner.

Public hearings concerning the proposed reservoir were not popular among many stayers or relocatees in the sample. While most of the relocatees knew of plans to build the dam for at least four years, less than one-half of them indicated that they had actually attended any public meetings on this matter.

#### Attitudes Toward the Days Creek Dam

As indicated previously, most residents in the South Umpqua are in favor of the plan to build a reservoir at Days Creek. The relocatees constitute a near uniform exception. People's attitudes toward the project and its benefits and/or limitations did not really vary significantly from sample to sample, with the exception of relocatees. Downstreamers indicated that they felt the primary benefits would come in terms of flood control. They also felt that many recreational related benefits would accrue. Stayers concurred that flood control would be the dam's most important benefit. Relocatees felt very few, if any, benefits would ramify from this project. Some did express that they felt downstream areas needed some type of flood control protection; they had doubts, however, if the Days Creek Dam alone could provide this.

While the population generally felt that significant benefits could accrue from the construction of the dam, they indicated that deleterious effects could also occur. Downstreamers expressed this concern with the potential loss of hunting and fishing grounds. Stayers

felt that there would be general environmental effects that would create natural imbalances. Relocatee concerns were mainly with the inundation of lands and loss of houses and property as irreversible effects. Noise associated with actual construction of the dam and reservoir was thought to be a negative factor only by relocatees. The more positive downstreamer and stayer sentiments can be attributed to the fact that both had nothing to lose in terms of land or properties and more to gain if the reservoir at Days Creek is constructed. Of course, any relocatees who remain and move to the downstream area will benefit in terms of flood control or augmentation. Any benefits that might accrue over a period of time will place them all in direct line as beneficiaries. Relocatees showed more emotional involvement with the proposed reservoir and felt themselves as the sacrificial lamb, i.e., everyone stood to gain from their expense. Even though some agreed that the benefits accruing from reservoir construction might outweigh any monetary investment, they nevertheless maintained negative attitudes toward the Days Creek project.

Downstreamer attitude toward partial flood plain evacuation. Most downstreamers were not favorable towards partial flood plain evacuation, that is, the physical movement or relocation of residences, industry or commercial enterprises in the five to ten year flood zone.

These are the areas along the South Umpqua River or its tributaries that are most prone or subject to periodic flooding. Less than one-half of the downstreamers indicated that people should be moved from the most potentially hazardous areas, while others expressed the

desire for other measures or alternatives to be explored or initiated.

Stayer attitudes toward loss of the relocatee population. Most stayers did not express any real concern for the fact that reservoirs tend to dislodge people, their homes and lands (see table 49). This is not surprising since stayers felt that the benefits accrued by the building of Days Creek Reservoir would far outweigh any potentially harmful effects that might occur to them. The Days Creek stayer population did not feel that they would suffer any significant loss by the physical removal of the Days Creek relocatee population.

Relocatee attitudes toward relocation. Not too surprising is the fact that over three-fourths of the relocatee population was in strong opposition of being forced to move from their lands and homes. Their feelings were strongly oppositional.

Chief correlates of favoritism to the Days Creek Dam. Most obvious is the factor of not being physically effected by the project. In general, the more highly educated, the more experience in larger urban environments and the younger in age, the more rejection of the project. Favoritism correlates positively with lower education, lower and middle economic status, non-urban socialization experience and middle to older age categories.

#### Attitudes Toward Alternatives to the Days Creek Dam

Sample attitudes toward alternatives to the proposed reservoir at Days Creek will be discussed by the investigators in a forthcoming publication. Briefly, the alternatives to be discussed are (1) a multi-purpose dam, (2) watershed rehabilitation, (3)

flood plain evacuation, (4) a downstream levee system, (5) a series of small dams on tributaries of the South Umpqua River and (6) combination levee and reservoir.

Generally, relocatees and stayers favored a series of small dams on one of the South Umpqua's tributaries, such as Cow Creek, rather than the proposed structure at Days Creek. Downstreamers, however, felt that a multi-purpose structure at the Days Creek site, because of its diversity, was the most feasible alternative of those mentioned.

#### Water Resource Development and Cultural Change

People perceive the proposed reservoir at Days Creek to impact upon and create changes with their communities and environment. Most of these changes were thought of in very positive terms, others were expressed in a more negative way. Relocatees, who would lose their houses and place in their community, did not feel the reservoir would create many positive benefits. They felt that other community schools would experience an overcrowding and general disruption of daily classroom activities. This would stem from not only an influx in construction workers and their families, but also general population increases that would come after the reservoir was constructed.

Although stayers admitted that the loss of land from inundation could not be viewed in a positive manner, they did indicate that they felt their particular community would experience a trend of positively related factors. The influx of construction workers and their families was considered beneficial in that this would provide an immediate

increase in consumer activities. This meant that hotels, motels, restaurants, sporting goods stores and contractors would benefit from the immediate thrust of such spending. While undesirable types of people were anticipated to be attracted to the community (hippies, prostitutes, gamblers and "motorcycle-types"), their period was considered to be short lived with a new order soon prevailing.

Those downstream from the proposed dam site expressed their optimism in the most positive terms. They did not feel their particular community would be threatened by undesirables. Any negative changes created were considered to be less immediate and less significant. They felt that their world generally would improve by way of the economy. Increased spending activities as a result of the dam construction and the subsequent expected population growth were viewed as factors alleviating the present economic difficulties of the area.

One interesting paradox should be noted. While people admitted to the prospect of Days Creek Dam creating changes in their setting, and most people favored these changes in terms of the economic boosts and increased business opportunities they represented, they nevertheless uniformly said that their community and area were now precisely what they wanted. The attitudes of relocatees are consistent insofar as they disfavor the dam and view its consequences in negative terms. A trade off is apparent for the stayer and downstream populations. They view the situation as one where little or no personal investment might result in significant personal benefits. The primacy of economic

development over "things as they are" is obvious. The tendency of some people to personalize the benefit prospects also is apparent.

#### Social-Psychological Adaptability to Change

It is presumptuous in the extreme to claim that any small number of questionnaire items provides a definitive description of individuals' capacities to adapt to the multifarious changes they face. Data we have used to make an assessment of this set of variables include specific questionnaire items, field observations and open-ended interviews, and discussions with key members of the area whose training and experience provides them with a perspective on the subject. Analysis of this set of materials is substantially checked and enriched by historical materials on peoples' previous adjustments to challenges they have faced in the South Umpqua.

The questionnaire contained nine specific social psychological items for a partial assessment. They provided three different dimensions of personality: (1) powerlessness, (2) anomia and (3) authoritarianism. The presumption was that people who indicate substantial degrees of powerlessness (inability to influence their social circumstance), anomia (lacking a sense of self-to-others belongingness), and authoritarianism (conventionalism, submissiveness, superstition, stereotype and aggression) would not show an overall adaptiveness to change as individuals. Items were selected from the Neal and Seeman Powerlessness Scale, from Srole's Anomia Scale and from the Authoritarian Personality (F) Scale (cf. Miller 1970: 318-322, 366-373).

Items used were as follows:

1. Powerlessness:

\*Sometimes I feel personally to blame for the sad state of affairs in our government (agreement indicates a sense of power over immediate surroundings.)

2. Anomia:

\*In spite of what some people say, the lot of the average man is getting worse (agreement indicates social fatalism).

\*It's hardly fair to bring children into the world with the way things look for the future (agreement indicates present orientation and social distance).

\*Nowadays a person has to live pretty much for today and let tomorrow take care of itself (agreement indicates present orientation and fatalism).

\*These days a person doesn't really know who he can count on (agreement indicates social distance).

3. Authoritarianism:

\*If people would talk less and work more, everybody would be better off (agreement indicates conventionalism--rigid adherence to values).

\*Science has its place, but there are many important things that can never be understood by the human mind (agreement indicates superstition and stereotypy, submissive and uncritical attitudes).

\*People can be divided into 2 distinct classes: the weak and the strong (agreement indicates preoccupation with dominance-submission dimensions and superstition and stereotypy)

\*What youth needs most is strict discipline (agreement indicates authoritarian aggression--power and toughness).

The following table shows the frequency of agreement with the items in positive form. The powerlessness item is reversed to show evidence of powerlessness in the responses.

TABLE 50  
 SOCIAL-PSYCHOLOGICAL  
 POWERLESSNESS, ANOMIA, AND AUTHORITARIANISM

|   | <u>Downstreamers</u> | <u>Stayers</u> | <u>Relocatees</u> |
|---|----------------------|----------------|-------------------|
| 1. *Personal blame<br>(Powerlessness)                             | 64                   | 71             | 94                |
| 2. Live for the present<br>(Anomia)                               | 68                   | 32             | 33                |
| 3. Lot of man-worse<br>(Anomia)                                   | 46                   | 52             | 60                |
| 4. No child into world<br>(Anomia)                                | 27                   | 34             | 29                |
| 5. No one to count on<br>(Anomia)                                 | 39                   | 43             | 40                |
| 6. Science has place, but...<br>(Authoritarianism-<br>submission) | 72                   | 79             | 85                |
| 7. Talk less; work more<br>(Authoritarianism-<br>conventionalism) | 64                   | 68             | 75                |
| 8. Two classes of people<br>(Authoritarianism-<br>stereotypy)     | 33                   | 27             | 19                |
| 9. Youth discipline<br>(Authoritarianism-<br>aggression)          | 39                   | 46             | 31                |
| A. Powerlessness mean   | 64                   | 71             | 94                |
| B. Anomia mean  | 45                   | 40             | 40                |
| C. Authoritarianism mean  | 52                   | 55             | 52                |

\*Note: Inverted for index to show adaptability.

### Adaptation/Maladaptation to Change

1) Powerlessness. All samples show strong evidence of powerlessness, but only limited confidence can be placed in the single problem. The greatest unity in response came from the relocatee sample (94%) and the least amount of unity (still a strong response) was found among downstream respondents, thereby suggesting attitudinal diversity.

2) Anomie. Greatest evidence of anomie is shown in the downstream sample (mean = 45) while the stayer (mean = 40) and relocatee (mean = 40) populations show remarkably similar composite profiles. The greatest range in anomie responses was obtained in the downstream sample (68 - 27) while the least was found in the stayer samples (52 - 31). This range again suggests greater diversity in social identity and cohesion in the downstream sample.

3) Authoritarianism. Mean responses on the four items showed moderate authoritarianism in all three samples (all in excess of 50% but none over 55% as a mean). Very strong authoritarianism submissiveness was disclosed in all three samples, with the strongest in the relocatee sample (85). Very strong conventionalism is found among relocatees (75), with strong degrees among stayers (68) and downstream (64) samples. Low to extremely low (relocatee 19%) stereotype was disclosed and moderately low aggressive-authoritarian responses were obtained. Strongest authoritarian aggression was revealed in the stayer sample (46%).

4) Discussion. These measures show a moderate social-psychological

adaptability to change so far as our measures are concerned. The high powerlessness suggests a strong tendency for people to feel that they are not in control of factors causing changes and indicates a reactive rather than active posture in averting personal difficulties. This is corroborated by the mysticism (submissiveness) that is revealed in the authoritarianism responses. High degrees of conventionalism also indicate limited choices or innovative responses to change. These three indicators of maladaptation are strongest for relocatees, next in strength for stayers and least (but high) for the downstream sample.

Strongest evidence of adaptability is in relation to a lack of a tendency to stereotype which is correlated by acceptance of strangers and newcomers. In spite of a strong tendency to live for the present (downstream only), people generally have moderate confidence in the future. They feel that, at least in the short run, things are getting worse but they are moderately strong in their confidence that others can be counted on for support.

Feelings of powerlessness correlate with the anticipated immediate future effects of the dam. Anomie is a correlate of non-articulated organization that is most manifest in the downstream area. Anomia is not high for any sample, however. No significant differences exist with respect to composite authoritarianism. It is strongest among stayers and virtually identical for downstreamers and relocatees. Urban backgrounds would appear to correlate slightly with less marked authoritarianism.

Caution should be used in assessing adaptability since these measures do not indicate the population's resourcefulness in times of crises. They suggest an orientation whereby self reliance is a goal. There is a lack of confidence in government, a reservedness in depending too strongly upon others and a realism in appraising their present situation. In fact, one can suggest with some confidence that the variance in stayer-relocatee adaptability as measured here is in some way related to relocatee anxiety over the future and the feeling that they have no immediate control over having to move from their highly valued homes.

#### Social System Boundaries

Data from the present situation social profile indicate a structural pluralism so far as social systems in the primary and secondary impact areas are concerned. As has already been discussed in reference to communities of the South Umpqua, there is limited homogeneity to communities larger than Days Creek or Tiller. With the exception of stayers, there is little homogeneity to the sample categories as discrete social systems. The downstream area shows a tendency for non-articulation and a substantial degree of system pluralism. The relocatee sample shows a tendency for at least two systems to be represented, split by newcomer status, education and age. The greatest sample of social homogeneity is suggested for stayer elements of the upstream sample but here, too, the different locations and adjacency to communities of the stayer elements limit their integrity.

Data show a high degree of social non-articulation in Roseburg

proper and higher degrees of community cohesion and articulation as one progresses upstream to smaller communities. The crises of impending relocation indicates a drawing together of some relocatee persons of diverse biographical backgrounds who previously had been less strongly tied. Impending relocation undoubtedly contributes to mutual concern and communication among those affected. The unity of relocatee responses over the aforementioned material illustrated this tendency. So, too, does their involvement in organizations to stop the dam. The lack of stayer water resource attitude response unity can in part be explained as the inverse of a relocatee crises.

Data show the impact area and sample category designations have only limited pertinence as social system markers. The social systems, and to some extent the articulated social structure, of the basin are revealed best at the small community level. Physical communities are a nexus of social ties to which people relate in definite terms. Rural people consider themselves as "residents" or within the province of adjacent small towns. The nature of their ties has been discussed in the social characteristic section. Even the larger community of Roseburg shows similar characteristics. Here, however, the neighborhood, co-workers and friends form the social nexus to which people most strongly relate.

Canyonville should not be considered as within the "primary impact area" to the extent or in the same context of upstream communities. The social orientations of people in Canyonville are, for the most part, to the central valley - to Roseburg - or to other cities

accessible by Interstate 5. Residents of Canyonville feel closer to Days Creek and the project than do most downstreamers, but their attitudes toward it are generally similar to downstreamers.

## CHAPTER V

### PROJECTED CHARACTERISTICS WITHOUT THE DAYS CREEK DAM

The boundary configurations of cultural systems, like ecological systems, fluctuate and change according to certain internal and external processes. A temporal boundary of a cultural system will last indefinitely until human extinction, disorganization, disinterest or departure deem otherwise. The study of such changing systems and projections of their future requires information of a baseline nature as to what trends or tendencies come out of the past and what kind of a configuration they manifest in the present. Previous chapters on the history of the South Umpqua and the present social situation provide such a baseline for this chapter.

This chapter, then, deals with projections of the future of the social systems in the primary and secondary impact areas as they will develop without the proposed Days Creek Dam. Projections expected to occur without construction of the multi-purpose facility at Days Creek are presented as pertinent to respondent and agency perceptions so far as practicable. Selected variables developed from respondents have been cross tabulated and tested for significance using a simple chi-square technique. In other cases, particularly where variables were not suited for such correlations, or, implied little in terms of future possibilities, such data are combined with other materials to examine their implications for the future of the region without the Days Creek

Dam. Information from agencies, public and private, also has been evaluated in terms of forecasts for future development or blueprints for development. The combination of material is presented in categories developed out of the instrumental cultural functions discussed and described in Chapters I and II.

Within the present social situation for the sample populations, various factors are operating as survival mechanisms for their culture and social systems. Many such mechanisms function as community cohesion and adaptation devices. These are examined in the following materials developed from the present social situation.

#### Population Physical Well-Being

Instrumental to the continuing viability of a given population are its growth, balanced migration and the provisions that are made institutionally for land use planning, fire protection, law enforcement, medical facilities and other safeguard measures. Since the secondary impact area is the primary locus of the county population and its major services, the future of population viability is contingent upon the maintenance and growth of population in the primary impact area.

Growth of the population in the South Umpqua is a given. The extent to which it will occur is a matter of considerable diversity of opinion. The following table shows a projection of Gruen and Gruen developed in 1975 from employment data on the county.

TABLE 52

## DOUGLAS COUNTY POPULATION GROWTH

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| <u>Year</u> | <u>Population</u> |
|-------------|-------------------|
| 1970        | 71,743            |
| 1975        | 77,700            |
| 1980        | 81,700            |
| 1985        | 86,150            |
| 1990        | 89,250            |
| 1995        | 91,250            |
| 2000        | 97,000            |
| 2005        | 100,000           |
| 2010        | 104,000           |
| 2015        | 108,000           |
| 2020        | 112,000           |
| 2025        | 116,000           |

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These figures are more conservative than other population projections as will be noted later, particularly those used by county planners. Gruen and Gruen have based theirs upon anticipated economic development of the county as a whole as it is able to sustain growth (Gruen and Gruen 1975). A plus 60 percent growth factor is expected by Gruen and Gruen to occur from 1970 to 2025, given the in-migration for economic development and its employment prospects (ibid.).

Roseburg presently covers some 55 square miles, including the city proper and its rural environs. Its subsequent growth, and that of other central valley towns, is expected to be the basis for much of the whole county population growth. The following table indicates population growth for the larger communities from 1960 to the most recent figures available and a projection for growth to 2025, using the estimator offered by Gruen and Gruen.<sup>18</sup>

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18. Projections to 2025 are ours, not Gruen and Gruen.

TABLE 53

## POPULATION GROWTH PROJECTIONS

|                    | <u>1960</u> | <u>Present</u> | <u>2025</u> |
|--------------------|-------------|----------------|-------------|
| Canyonville        | 1,089       | 1,080 (1974)   | 2,000       |
| Myrtle Creek       | 2,231       | 2,945 (1974)   | 6,600       |
| Myrtle Creek South | N/A         | 1,039 (1970)   | 2,000       |
| Riddle             | 992         | 1,145 (1974)   | 2,000       |
| Roseburg           | 11,467      | 16,602 (1975)  | (30,000)    |
| Winston            | N/A         | 2,395 (1974)   | 5,000       |

Note. Sources include: 1960, 1970 data are U.S. Census, op. cit. 1971 data from Douglas County Resource Atlas, op. cit., Center for Population Research and Census, Population Estimates of Counties and Incorporated Cities of Oregon, Portland State University, 1970 and 1971 reports. 1974 (certified 1 July 1974) and 1975 data are from: Supplement to Certificate of Population Enumerations and Estimates of Counties and Incorporated Cities of Oregon, July 1, 1974 and March 31, 1975.

Population concentration in the upstream or primary impact area occurs at Canyonville, Milo, Days Creek and Tiller. Some of it is distributed in other small population clusters throughout the upriver area. Population estimates for the small communities exist in census material only by aggregate, that is, the South Umpqua area. This area, unfortunately, does not correspond to the configuration of our primary impact area and precise population enumeration is therefore quite difficult. The 1970 population of the South Umpqua area was listed at 3,166 persons (State of Oregon 1973:24). Canyonville, which is included in the figure, had a populace of 940 or some 30% of the area total. Since the remainder of the population was only dealt with in area aggregate, interviews were conducted with long-time residents who are now working for the United States Postal Service and they revealed the following information. Days Creek has had a population growth in the last five to ten years and would have

probably experienced more growth if adequate housing and sewage systems were available. Recent immigrants represent a cross-section of the population from those younger individuals who are just establishing themselves in life to the older retired persons. Categorization of the immigrants is therefore difficult (Interview: U.S. Postmaster Days Creek 1976). Most are trying to escape from larger communities to this rural area.

Although estimates are not available, those leaving Days Creek depict a gradual and infrequent element that could hardly be considered indicative of the area. The current population of Days Creek is 1,109.

The U.S. Postmaster at Tiller, Oregon, feels that the area has been fairly stable in terms of in- and out-migration of its population. Approximately ten years ago some 60 people left because of the closure of two sawmills. The informant did not feel that people were being attracted to this area for permanent settlement and he felt that some actual population stagnation may be taking place. He also indicated that the out-migration phenomenon was so gradual and insignificant that it could hardly be observed as an increasing trend. Reasons for current out-migration could not be specified by the informant (Interview: U.S. Postmaster Tiller 1976).

While significant growth is not anticipated for the upstream area of the South Umpqua without the dam, it is more than likely that a large percentage of subsequent population growth will occur in the Tri-City region of the downstream impact area, the area in-between Canyonville, Riddle and Myrtle Creek. County planners are currently attempting to

reorganize building codes and zoning ordinances for Tri-City. Presently there are several factors that are limiting growth for this section of the county. The nonavailability of housing is as significant as is an incomplete sewage system. The latter, however, should be corrected by late 1976 or early 1977 (Interview: Douglas County Planning Department 1975). Tri-City is where growth is destined to occur, regardless of the presence of Days Creek Reservoir.

The upstream area has stringent limitations for its potential growth because of nonavailability of housing, poor water supplies and sewage disposal. As mentioned previously, Days Creek does not have a community water supply or sewer system. Domestic water supplies come from shallow dug wells to the basic rock level which constitutes a small portion of total supply. Only some of these are successful in terms of providing unpolluted water. Water from springs also constitutes part of the existing supply, for example, at Days Creek School. From Canyonville, downstream, except for the incompleted portion at Tri-City, there is proper waste disposal system. Canyonville currently is in the process of expanding its system to meet existing needs.

Canyonville, Tri-City, Myrtle Creek, Winston, Dillard and Roseburg can sustain the largest proportion of population growth. Table 54 shows growth statistics from 1940 to present, with projections to 1990 by other sources.

TABLE 54

## COMMUNITY POPULATION GROWTH PROJECTIONS TO 1990

| <u>City</u>    | <u>1940</u> | <u>1950</u> | <u>1960</u> | <u>1970</u> | <u>1980</u> | <u>1990</u> |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Roseburg       | 4,492       | 8,390       | 11,467      | 14,461      | 16,200      | 18,000      |
| Winston        | N/A         | N/A         | 2,395       | 2,468       | 5,400       | 8,670       |
| Myrtle Creek   | 441         | 1,781       | 2,231       | 2,733       | 3,350       | 4,000       |
| Riddle         | 214         | 634         | 992         | 1,042       | 1,100       | 1,600       |
| Canyonville    | 225         | 861         | 1,089       | 940         | 1,150       | 1,350       |
| Douglas County | 25,728      | 54,549      | 68,458      | 71,743      | 81,800      | 89,250      |

N/A--not available

Note. Source: Douglas County Resource Atlas 1973; U.S. Bureau of Census, Bureau of Municipal Research and Service, 1958.

Although the table depicts growth trends, Douglas County urban and rural populations have been experiencing a relative decrease since 1960 (U.S. Bureau of the Census) in comparison with the state. This information suggests that the county is still experiencing growth in its more densely populated areas, but at a much slower rate than other areas of the state, e.g., the Willamette Valley. Even though it may be losing some of its rural inhabitants to its urban areas, the county will still see growth in present rural areas of the secondary impact area. Much of this growth will be from a continued spill-over of the Willamette Valley as mentioned earlier. Growth is not anticipated in any significant manner for the upstream area, largely because of the restrictions that exist and partly from the attitude of not wanting county planners to interfere with the present way of life in this rural area. This area is not included in specific forecasts in the county comprehensive land use plan.

Law enforcement, fire protection and medical care facilities were described in Chapter 4 as they currently exist in the primary and secondary impact areas of the South Umpqua. The county will need to expand these facilities to adequately cope with existing population and growth projections, especially in the upper South Umpqua. The Sheriff's Department has already indicated that it does not have sufficient manpower to handle the existing impositions on the county. Rural areas are not patrolled as heavily as desired by any one law agency. The county is currently building new jail and office facilities in Roseburg, but these are yet to be completed.

Currently city police forces are adequate; however, some additional personnel are needed periodically. The upstream area drastically needs law enforcement personnel, if not facilities, but would probably resent their interference.

Roseburg currently is expanding one of its hospitals to meet existing growth of the city and county. The two hospitals that exist in the city can most likely handle existing health needs adequately. Both Myrtle Creek and Canyonville have hospital facilities that have been reported as inefficient in terms of their cost and benefits. Although neither may be able to cope with sudden population increases, they may well be able to handle slow, controlled growth. Medical personnel are now in short supply and must be increased in order to avert difficulties. Myrtle Creek and Canyonville currently are not projected to grow at alarming rates as indicated in Table 54 and demands for service will be correspondingly lower.

Fire protection is more adequate in the upstream section than is law enforcement and medical facilities. If, however, this area is ever designated and zoned for subsequent growth, then additional facilities and services will be needed. Volunteer organizations may work efficiently in the present but they are limited in effectiveness due to lack of adequate funds for the maintenance of equipment. This factor must be considered in all subsequent development.

Since the general population growth paradigm in Douglas County is presently directed toward Myrtle Creek and Tri-City, adequate facilities to ensure the viability of the population will have to be developed here. In addition to the aforementioned measures, other steps will have to be taken so that settlement is not zoned into the more potentially dangerous flood plains. Where Cow Creek joins the South Umpqua at Tri-City (Missouri Bottom), exists one of the major natural pooling and backwater areas during floods (U.S. Government 1972). Although Myrtle Creek has a rather narrow flood plain, Tri-City and adjacent, Riddle, have rather wide existing plains and are more vulnerable. If settlement is focused in this area, some type of protective measure will have to be instigated to ensure adequate protection of the populace and property from the ravages of subsequent floods.

Thus from the point of view of population physical well-being and viability, the South Umpqua region must provide employment for anticipated population growth and it must possess requisite services for population welfare and safety, irrespective of the Days Creek Dam's future. Without such improvements and investments, the primary cultural function of

population physical well-being may be quite limited and the basin placed in potential crisis. In relative terms, it is near that crisis now in some areas of population physical well-being.

#### Enhancement of Livelihood

If migration occurs as projected for the primary and secondary impact areas, then the labor and general employment situation will need to improve in some major manner. As noted, the economy of Douglas County is sustained by lumbering, agriculture, lesser manufacturing enterprises, wholesale and retail trade, mining, tourism, and government (cf. Gruen and Gruen 1975; Oregon State University Extension Service, 1973). Roseburg Lumber Company alone currently employs some 4,000 people in its various operations throughout the county. Approximately one-sixth of the total county labor force is employed by the timber products industry.

Roseburg is experiencing labor force problems in terms of a surplus of semi-skilled and unskilled laborers. This situation is difficult to resolve or alleviate, given the current market conditions and inclination of manufacturers to avoid high labor investments. Jobs are therefore becoming more and more highly skilled specialties and the currently unemployed find it difficult to compete for them. According to the State Employment Office at Roseburg, most of these people are recent migrants to the area who lack the requisite skills to compete successfully for the nature of jobs available. Given the number and percentage of newcomers found in the research sample and the birth rates for the county,

immigration cannot account for all of the difficulty. Unskilled and inexperienced local people are also in a difficult position.

In order to accommodate the predicted population increases, the timber products industry will have to undergo a substantial magnitude of increase. Given the prospect of increased automation in processing, output will have to exceed the plus 60% of projected population growth. Given the continuing decline of agricultural workers also, new alternatives for employment will have to be developed. Government and public service sectors surely will increase but cannot accommodate the projected population.

It can be argued cogently that unless the employment and economic opportunity structure are enhanced in Douglas County, the population will not increase. If the economic growth foreseen for the county by Gruen and Gruen is correct, and this growth is caused by expansion of the economy, then the situation will be at least partially resolved. Assurance of public expenditures for necessary services and public employment associated with it are not given, particularly since the prevailing attitude of people in the basin toward tax increases outside the realm of education is quite negative.

South Umpqua residents felt that employment opportunities in the area presently are from mediocre to poor. Feelings on future economic conditions were slightly more optimistic in that people felt the economic status of the county would improve in the immediate future. Upstreamers as well as downstreamers did not feel the construction of the Days Creek Reservoir would be significantly effective in terms of any long-range

economic improvements. Cross-tabulations between the variables "feelings on future economic conditions" and "economic opportunity without dam construction" did not reveal any significant relationship. Residents simply felt that the dam would do little, if anything, to improve the local economic picture. No significant correlations were revealed when cross-tabulations were run against biographical data. The feeling was general to all samples.

Although the employment and general economic situation was seen as quite depressed by sample respondents, only downstreamers indicated any sort of willingness to move from the area to seek employment. Stayers and especially relocatees indicated they would not be willing. In general, college graduates expressed more of a desire or willingness to move outside the area for more gainful employment.

South Umpqua residents are highly dependent upon the timber industry, as mentioned earlier. As one agency director put it, "if there is talk that Roseburg Lumber Company is going to close down, people go to church and literally pray that it won't." By sample, most were dependent upon the timber industry for their livelihood but progressively more agriculture appeared as the sample moved upstream.

Future economic conditions, especially in terms of employment projections, show interesting trends. Gruen and Gruen (1975) investigations project that agriculture employment will continue to decrease until about the year 2025. This will occur largely because of increased productivity through further mechanization. Mining has been adjusted downward because of the eventual depletion of nickle at the Hanna Mine near

Riddle. In addition, they agree that technological innovations will replace some of the labor force in most industrial operations. Moreover, lumber and wood products industrial employment trends are subject to several other variables that are subject to national market considerations. Of most significance is the possible usage of rapidly maturing varieties of trees by the 21st century. Food and kindred products and services are projected to show significant increase at least to the 1990 period (cf. Gruen and Gruen 1975).

Farming practices are not currently projected to change radically in Douglas County. This would only occur with a change in ownership; which is usually after land prices increase. Although specialty horticultural crops are shown to be an increase, these will never be of any significance in the upstream area because of soil discontinuities. Many tree fruit and nut varieties are on the decline because of market fluctuations and urban encroachments (Interview: Douglas County Extension Agent 1975).

Irrigation practices have already been discussed as they currently exist. The majority of those involved in agriculture endeavors who did not practice irrigation indicated that they would not do so even if more water were made available. People do not currently pay for irrigation on the South Umpqua and do not wish to do so, especially through tax levies. Reasons for not wanting to irrigate are fairly straightforward--many were only involved in subsistence agricultural activities on a very small scale and it would not be feasible to add irrigation in terms of their own benefit-cost calculations. Still others were involved in

activities not needing irrigation; i.e., animal husbandry or grazing, which constitute the greater use of agricultural land.

Chapter 4 dealt with the housing availability situation for the primary and secondary impact areas of the county. To reiterate, the largest amount of new housing starts will occur in the downstream area since it will be catching the brunt of the population and industrial growth. Mobile home living is currently on the increase in the county, a plus 98% increase since 1970 (Johnson 1974:26). According to Johnson's estimates of costs, with accessibility to some of the rural areas, and the overall advantage of mobility, this trend is also expected to increase.

As of 1970, 3.18 persons reside per dwelling in Douglas County, according to calculations made by Gruen and Gruen. They project the figure to decline by 9% for the 1970-80 decade, 4% to 1990, and by some 2% for every subsequent decade to 2025, thus necessitating more housing per capita. Similar projections also occur for the U.S. Department of Agriculture (Gruen and Gruen 1975: II-22). The housing situation is not only dependent upon the local economy, but also the national outlook as well. Since the county is timber-oriented, improvements in the economic outlook of housing would provide the impetus needed for alleviation of the economic depression but are dependent upon national and region market fluctuations.

Downstreamers felt that property values would remain the same if the dam at Days Creek would not be constructed. Stayers, and even more relocatees, felt that property value would increase without the dam. In

general they felt that the economy would take care of itself and that the dam would detract from more than enhance property values.

Thus the situation of population livelihood and subsistence in Douglas County's future is very complicated and subject to factors of national and regional economy over which the local population and economic developers actually have little control. Given the national and regional situation for growth, the area will begin to show more economic diversity and less direct reliance upon an increasingly automated timber products industry. The requirement therefore exists for the leadership of the county to be cognizant of opportunities for innovation in economy that will place the South Umpqua region in the forefront of future economic trends. The present dependence indicates that most alternatives come from the exploitation of timber resources and perhaps from new processing techniques for agricultural produce. Clearly the levels of skills and knowledge in the timber products industry of Douglas County are equal to innovation to establish national and regional trends of the immediate and longer range future. A reactive posture to constraints will limit the extent to which subsequent livelihood for the anticipated population, even by conservative estimates, may be accomplished. Agricultural innovations pertinent to the growth of the county are less likely to occur, except in the food processing and kindred products industry. As pointed out by Gruen and Gruen, this area of development shows the best prospect of substantial change. Still, the timber products industry promises to be the mainstay of the economy of the South Umpqua region in the reasonably near future.

## Community

Community structures and identities in the South Umpqua without the proposed Days Creek Dam are likely to continue to show increasing amounts of nonarticulation as continued population spill-over from the Willamette Basin occurs and as the number of people generally in Douglas County inexorably grows. As has previously been discussed in this chapter, most of the population growth is scheduled to occur in the central valley, particularly in and about Roseburg and in the Tri-City area. Increased prospects for economic gain will mean increased numbers of opportunity structures for social gain in these areas. The result will be an even more diffuse social circumstance and a greater mix of differently oriented and directed people. It is nearly a truism to note that these very circumstances are part and parcel of the transition from an articulated pattern of organization to a nonarticulated pattern.

Circumstances described in Chapter IV on individual satisfaction with present neighborhoods, community and area should not change dramatically, especially in the downstream area. A more significant change can be expected in the Tri-City area and adjacent small towns than in Roseburg. A lesser degree of community level identity can be expected and concern with neighborhood and area, not so much as social settings as with their image and growth potential, can be anticipated. The upstream area can conceivably move in two quite different directions, neither of which will occur very rapidly. First, it is possible that the absence of the Days Creek Dam will mean an enhancement of peoples' identity to

neighborhood and community as social centers. On the other hand, an increase of newcomers from urban backgrounds could increase demands for neighborhood and community improvements along lines consistent with maintaining the natural setting. These two directions are not mutually exclusive and we would project a modicum of each in the future of the upstream area.

A number of dissatisfactions can also be anticipated, particularly in the downstream area, and also in and immediately adjacent to the community of Canyonville. Canyonville enjoys a prospect of seeing itself become "the gateway to the Days Creek Recreational Area." The dam is viewed by some as fostering Canyonville's economic growth by attracting new tourists and associated enterprises. The social correlate of such growth means that for some there will develop new echelons of social influence and opportunity as well as new avenues not heretofore available. The prospect for Canyonville, according to many of the development advocates, includes an image of new residents being attracted on a permanent basis from all parts of the state and county. In reality, however, most of the real economic benefits will accrue farther downstream, in Roseburg, because of obvious flood control and flow augmentation features of the project (cf. Smith and Hogg, 1972). Canyonville does stand to reap some of the recreational benefits that people hope for but the magnitude of these appears to be quite over-rated locally.

Downstreamer dissatisfactions doubtless are to be voiced primarily in economic terms, as they have in the past and continue in the present. Social dissatisfactions are less immediate to the cognitions of

downstreamers. Without the dam it is most reasonable to project heightened downstreamer concern about the South Umpqua and its limitations on growth and development of the central valley. In latent terms, its conditions of low summer flow and winter flooding have a diffuse social impact of limiting social opportunity structures for downstreamers.

The small percentage of individuals who indicated that they were leaving the South Umpqua area were doing so because of the employment situation, or, because of a lack of adequate housing. Most did not have plans, however, to leave immediately. As has been noted, none were leaving because of the proposed dam.

This limited exodus situation will continue so long as ancillary development and employment prospects do not occur in the basin, particularly in the upstream area. The community impacts of emigration and the selective immigration may mean an even more homogeneous population in the upper region, or an increased bifurcation of the population. It still appears that those who own land and can subsist through its productivity or through their favored employment circumstance will be a core of community integration vis a vis a newcomer element. The newcomer elements will continue to be attracted by the natural beauty of the upper basin and come, in part, to enjoy its isolation. This aspect of the basin will continue to be valued both by the older residents and the newcomers to the primary impact area, even though many of their other values may be at poles. Another suggestion is that they will also share a dissatisfaction with outside governmental or public interference with their lives. As

the downstream pressure mounts for some alternative to the Days Creek Dam, so, too, will the upstream tendency to resist encroachment.

Upstream communities currently foster sufficient numbers of organizations and social activities to allow for the "belongingness" wishes of the population. As was previously noted, they are not whole-sale joiners; they are one organization folk. They are not likely to increase such inclinations and therefore we would project a somewhat underused social opportunity structure in the future without the Days Creek Dam. Favorite recreational activities of hunting and fishing will continue, given the continuance of sport animal species and provided that some other form of development does not alter the environmental situation.

It has been noted that the county currently spends significant amounts of money and effort on development and maintenance of recreational facilities in areas other than the upstream South Umpqua. We can only project that this pattern will continue for some time since Douglas County is the eighth largest county in the state in terms of money taken in from tourist spendings and anxious to increase its share. The South Umpqua's upper reaches will continue to receive only small increments of these public expenditures without the Days Creek Dam and a key attraction for tourist dollars to the county.

Educational facilities are currently adequate to cope with the anticipated controlled growth of population visualized for the South Umpqua. There is no present over-crowding downstream. In fact, in some cases enrollment is declining. Upstream there are adequately sized facilities for the residents. Population in the upstream area without

the Days Creek Dam should not be sufficient to warrant expensive new building or expansion of facilities on any crash basis. As will be seen in the next chapter, the long term situation with the dam will not be significantly different.

Thus without the Days Creek Dam we project an incremental growth of social systems as the economic base and population increase in the county. The character of communities that presently are in the Tri-City area will be changed the most. Upstream areas, not including Canyonville, will change more slowly in terms of the pressures of population and economic development. Population replacement through a continuation of the observed urban escapism and its converse urban immigration to jobs and better housing will have a selective effect on the general structure of upstream communities, increasing their tendency to dichotomize.

#### Communication

The greatest single communication problem for Douglas County has persisted throughout its history. This is the need for improved routes and means of transport from the eastern to the western portion of the county. To some extent the upper South Umpqua shares this difficulty but to a far lesser degree than does the county as a whole. The prevailing concern is a cheap, efficient means of transporting goods to the coast for shipment to ports of other states and nations. River trafficking has proven inefficient and virtually inoperative because the growth center of the county is too far upstream for easy access to Reedsport. The obvious answer now must be sought in terms of highway development and the

developments to this date have proven costly, as are improvements. Highway 227 from Canyonville to Jackson Creek is a limited parallel to the county's main historical concern. Like many routes to the coast it is narrow, crooked and in need of constant repair, a legacy of the earlier days when men made decisions to parallel the natural course of rivers rather than to move mountains for multi-laned monuments to their own veracity.

Many local agencies, public and private, have expressed the need for improvement of transportation facilities in Douglas County. Personnel from Umpqua Regional County of Governments especially elaborated this as a need to provide the impetus to revitalize the current economically depressed situation of the county. An east-west rail system has been contemplated for years. Other alternatives, e.g., a pipeline, might be more feasible for transport of such products as wood chips etc., and their environmental impact might be less than a rail line, but they have not yet developed. Commercial air transport from Roseburg to other areas has been lost in recent years. Charter services still are maintained but the air freight and passenger traffic that are so critical as markers of "arrival" show little prospect of near-future reestablishment.

Perhaps the biggest boon to Douglas County since the completion of the interstate railroad system has been the presence of the Interstate Freeway complex, which gives the county a first-class road transport mechanism on a north-south axis. The Willamette Valley is but an hour to the north; California is but four hours to the south. Interstate Freeway 5 serves as the corridor for the county's trade and other commerce

and the chief means of maintaining economic ties with the national market economy.

The key vexing situation nevertheless remains--economical routes to the coast. It seems paradoxical that in the latter half of the 20th century such a circumstance would prevail in Douglas County. It does and continues to depend upon state and county affluence and priorities. So, too, does the circumstance of Highway 227, which is in serious need of improvement and shows little prospect of that improvement until the probability of development is sufficient to allow benefit calculations that exceed costs.

#### Innovation

Technological changes that occurred in the late 19th century already have been discussed in terms of their impacts upon the population of the South Umpqua. These developments, especially those relating to the timber industry, should be considered in reference to the future and their effects upon the quality of life and social well-being of the South Umpqua residents.

A major difficulty facing all elements and stages of any planning process is the need to mirror the community sentiments and preferences in order to construct an adequate quality of life and social well-being index. This of course presumes that such planning is optimum only if it reflects public preferences and that somehow a collective intelligence emerges from the full range of public preferences. Social well-being is usually thought of as being a measurement of the quality of life or a

general state of contentment and happiness. Implicit in this is the idea that the quality of life and social well-being are direct correlates or the reverse side of the same coin. It therefore is logically assumed that as one increases the quality of life for a population that one is automatically increasing the social well-being (cf. Smith 1973).

Smith argues quite correctly that these phenomena are different and that circumstances may prevail in which a design to improve the quality of life may in fact reduce some people's happiness, thereby lessening social well-being (ibid., p. 190). While we would agree with the distinction made by Smith, we would quibble semantically with the definitions he offers. Quality of life would appear to imply to us a subjective degree of satisfaction or dissatisfaction regarding the totality of a person's existence, whereas social well-being would imply an objective and specifiable measure of a person's life situation. Smith views quality of life as an objective measure and social well-being as a generic concept in which quality of life and happiness are merged. The semantic debate is somewhat immaterial. The important matter is "...in showing if and how human adaptation is benefited from an adequately nourished, housed, and educated populace, which is healthy" (ibid., p. 196).

The philosophical and theoretical debate over these phenomena may rage well into the future. In the meantime human beings are subjected to developments on the basis of the best assimilation of the most accepted planning proposition. The most accepted is usually not the most current and history has shown that those used have not been optimal. Hopefully those most current avoid the pitfalls of some of those previously used.

Douglas County is especially reliant upon the wood products industry for its people's livelihood and extended social well-being. Gruen and Gruen have examined this industry as has the Coos-Curry-Douglas Economic Improvement Association and both have concluded that there may be significant decreases in employment opportunities by the year 2000 or shortly thereafter. Much of this is attributed to an increase in technological innovations that will replace more members of the labor force. It is pointed out that these innovations may improve the overall efficiency of the timber processing industry and thereby derive greater profit for less financial input. From an economic standpoint, social well-being may be enhanced for some. It may also create an inverse circumstance of decreasing the social well-being of those individuals replaced by the innovations. If we consider such increased efficiency to be an index of enhanced social well-being, we must be in a position to say for whom. Such efficiency may also increase the prospect of shorter working hours for people in industry and presumably their greater pay for time worked. From a quality of life standpoint this would appear to be an advantage. Again, however, the question arises: For whom? By that same token, as Smith points out (1974), an increase in social well-being by no means guarantees an enhanced quality of life, even though the increases might pertain to the majority of people in a setting. The prospect of such uniform effects among culturally plural and socially diverse settings is extremely limited.

Thus it would appear that institutions which deal with long-range planning need to scrutinize closely and thoughtfully their use of the

notions of quality of life and social well-being. If the loss of employment in the timber industry of Douglas County can be accommodated by alternative means of worker absorption, then perhaps both phenomena can be increased or enhanced. Insofar as Douglas County currently has a surplus of semi- and unskilled laborers who pose considerable problems in the present, major alternative employment innovations must be sought very soon.

The above considerations indicate that a projection of the overall quality of life and social well-being for the future of the primary and secondary impact areas without (or with) construction of the Days Creek Dam is a most difficult task. Suffice it to say, given present attitudes, relocatees will profit most in the long and short run without the dam. Downstreamers are quite dependent upon it in the future for protection from flooding and for the augmentation of summer flows. They surely are to claim that they are sacrificing an important part of the quality of their life so that upstreamers can maintain theirs. While their social well-being might not be so directly affected as it will be in the upstream area, some limitations will be placed upon it in a collective sense. Stayers are in the middle to a very large extent. Their life quality would be maintained, but for some it would not be enhanced in the sense that they hope it would, given the Days Creek Dam. The social well-being of stayers would likely not be altered to a significant extent if the Days Creek Dam were not built. It is possible for some who strongly support the dam that the limited prospect for enhanced social well-being could negatively affect their perceptions of existing life quality.

Highly expectant, frustrated people are the stuff out of which social change is made. One such change could be their departure from the setting. Another could be a strong advocacy for a renewal of developmental schemes. Neither appears to be a terribly likely circumstance.

Subsequent innovations in the social environment of Douglas County also are most difficult to predict. In the main our national and regional tendency has been for social innovations to follow in the trail of technological innovations. We are therefore reasonably safe in projecting few social innovations for the South Umpqua without the Days Creek Dam, with fewer still for the upstream area. Fads and other forms of situational madness are quite likely. In fact, they are given. Deep-seated and lasting social innovations doubtless follow major economic changes, once the manifestations are known and once people see the opportunities for greater social advantage. Such pragmatism is by no means new to our scene. The fact of such innovation is not novel. The form it will take depends upon the extrinsic qualities of economic changes as they are perceived by the county residents.

## CHAPTER VI

### PROJECTED SOCIAL SYSTEMS WITH THE DAYS CREEK DAM

It is realized that any form of technological development, including that which is water-related, is a complicated and little understood process in terms of impacts and ramifications that influence interplay in the cultural-environmental system. Technological innovation and development are not alienated from the entire cultural-environmental process. Once technological development occurs, change is implicit as well as eminent to the cultural system as a whole. Changes that occur, especially in the non-material aspects of culture, such as the values, attitudes, beliefs and behaviors of people, are most often overlooked and underestimated in terms of their significance (cf. Foster 1962).

This chapter offers a projection of the Days Creek Dam's impacts upon the social systems in the South Umpqua Basin. It uses as its data base the descriptive material presented in Chapter IV, information provided by public and private agencies, as well as informant and respondent perceptions of and feelings about changes that may occur as a result of the construction of the dam. As in the case of the preceding chapter projecting the social environment without the Days Creek Dam, a combination of material is presented in categories developed out of the instrumental cultural functions outlined in Chapters I and II.

#### Population Physical Well-Being

It has been noted that Douglas County has experienced rapid

growth in the past and has managed to assimilate its migrants into already existing or expanding facilities and employment opportunities. Although the county does possess a sizeable percentage of unemployed, in relative terms it would appear to be holding its own. Much of the county's past population growth was similar in nature to what it expected to result from construction of the Days Creek facility - it was industry-related and stimulated by an increase in job availability. Unlike the rapid and sustained industrial growth period of the 1940-50 decade which was the product of a lumber boom, job availability from the Days Creek Dam project will be more truncated, mostly limited to the duration of the dam construction phase and mostly felt in the Canyonville and upstream area over a period of two years following an initial construction year of relative quietude. Thus while the onset of the dam's existence, the construction period, might be reminiscent of an earlier boom, it will rapidly alter from the pattern of an earlier decade of prosperity and settle into a reasonably stable operations phase. While most of the in-migrants will be commuters from other towns in the Umpqua and even the Rogue areas, their activity and that of what temporary settlers do arrive will be very significant to the immediate vicinity of construction, especially the Canyonville to Days Creek area of the upper South Umpqua.

We project that the Days Creek Dam will not substantially alter the population base of the whole area in the long run. Concentrations of workers are expected to occur for two years in Roseburg, Grants Pass and even Medford since housing, sanitation and water limitations

preclude much temporary settlement in the primary impact area. Some concentration also is expected in Riddle, Myrtle Creek, Canyonville and Tri-City. Canyonville and Tri-City will probably have the earliest pressure for housing from those anxious to locate close to their work.

Long-term post construction population changes are expected to be most pronounced for Canyonville and, as limitations on housing development decrease, in Days Creek and the westward valley region of the upper South Umpqua Basin. One should not expect more than a plus 20% increase greater than the projections offered without the dam, however. Present limitations on growth must be resolved before it actually can take place. This would mean that Canyonville's projected population in 2025 would not be expected to exceed 2400 as a result of present developmental trends in the basin and the presence of the Days Creek Dam. Other intervening variables may modify the picture but they are unforeseen at this point.

Persons relocated by the dam are expected to attempt to relocate in the South Umpqua and a modest percentage of them may do so. This would mean a more minimal loss than the 350 persons now anticipated to be required to leave. Most of the relocatees will find substantial difficulty staying in the upper reaches of the South Umpqua and will face severe personal costs that are entailed in moving goods, machinery, animals and households, as well as rising property prices. Those with alternative land holdings and higher educations are expected to adapt most readily. Older persons face the most severe difficulties in the loss of their present homes and property.

Depending upon the decision made regarding the Tiller Ranger Station relocation, upstream communities may suffer substantially. This is especially true of what may be left of the present Tiller service area and community, including the grocery stores and the restaurant-tavern. The loss of the station and the relocation of Highway 227 could force closure and collapse of many local accommodations. The prospect for their successful relocation is not good for the immediate area because of expected increases in land values and generally few alternative sites to maximize the new road traffic intersections. Jackson Creek would not appear to be a logical alternative for commercial services and public accommodations as they presently exist. The placement of the Tiller Ranger Station is critical to subsequent commercial and settlement developments in the above reservoir area.

So far as population growth in the primary impact area is concerned, then, we project its concentration in the area downstream from the dam itself. Additional housing concentration will occur along Highway 227 from Canyonville to Days Creek, in the hills regions surrounding Days Creek, and in the town of Canyonville itself. While the numbers may be insignificant to the county as a whole, they will constitute a major new element for this region, one that is sufficient to call for an expansion of services on an incremental basis. The organizational consequences of this growth are addressed in a later section of this chapter. The present physical constraints on housing development to accommodate this growth will be alleviated after substantial initial pressure to ease restrictions. Physical improvements

will be made in water and sanitation services at significant cost to taxpayers.

The primary impact will experience a tendency for increased concentration of its population, not only because of less river bottom land open to settlement, but because of the necessity to concentrate people for lessening the costs of critical services. Population growth in the western valley downstream from Days Creek will put significant pressure on farm lands and zoning regulation at the county level. Since the history of zoning shows it to be vulnerable, we project further erosion of farm lands for expansion of existing communities.

Population redistribution will entail the movement of relocatees from the area and the movement of additional newcomers into the primary impact area. The nature of this redistribution, then, is to involve mainly the substitution of one strongly community-oriented population for another whose likely orientations will be more strongly directed to neighborhoods and area as is now the circumstance for downstreamers.

From the standpoint of population size and balance, therefore, we project limited additional growth caused by the dam but a redistribution and concentration for the primary impact area. The latter processes can be sufficiently disruptive to belie the small numerical change. The construction of the dam will also mean subsequent concentration in the downstream area, but to a much lesser degree. This further concentration is consistent with planning policies in the county at this time. As greater amounts of water are available for waste disposal, etc., particularly during the summer period, more growth potential will be

visualized by downstreamers and planners. The result of this circumstance will be a furtherance of the concentration of goods, services and people, especially in the Roseburg and Tri-City areas. The dam itself will not be the significant cause. It will simply be a catalyst to an already desired program.

Physical well-being of the population also is related to prospective critical services available, especially health and medicine, law enforcement and safety, water supply and sanitation. Health and medical services in the downstream are not expected to be significantly affected by the dam, even during the construction period. Facilities in the Tri-City and Canyonville area will be moderately influenced by the work force living and commuting there. Additional out-patient and emergency service pressure are anticipated and permanent facilities must be expanded and/or improved in efficiency, particularly in Canyonville, for its longer term population expansion. As previously noted, there is a shortage of medical personnel in the county, especially in the rural areas which include the primary impact area. This situation must be corrected under any circumstance. The construction and operation of the Days Creek Dam will add to present overloads, however.

Law enforcement and safety requirements from the dam are most critical during the construction period. Following this period some requirements will continue to be critical; others will be minimal. We concur with the foresight of the Douglas County Sheriff's Office in our own projection. Reasonable expectations are:

- (1) Camp grounds being built after construction will add to the litter and congestion problem.
- (2) Vandalism is expected to increase at a faster rate than usual with the influx of people associated with the construction phase and later with recreation.
- (3) Traffic from Interstate 5 along Highway 227 will be a problem since the highway is windy and narrow. It is expected that accidents, injuries and fatalities will increase. The Sheriff's personnel felt that people will drive to Canyonville to purchase bottled liquor, thus compounding the accident potential.

Additional manpower requirements must be met. The Sheriff felt it would be necessary to put a temporary sub-station at Tiller to be manned by two deputies. After construction there would be a requirement for two water craft for patrolling the reservoir. It is expected that an increase will occur in criminal activities during the construction phase with prostitutes, fighting and drunkenness being common. The Sheriff mentioned that he foresaw crimes of passion increasing during the construction phase especially. This would include more family squabbles and related forms of violence, as well as assaults, etc.

In order to accommodate the expected increases in population for the primary impact area, an improvement and/or expansion of water supply and sanitation facilities must occur. While Canyonville has a complete sewer system, its load will increase. Water supply and sanitation in Days Creek probably will have to be tied in with the Canyonville system, if this is economically feasible. The dam will require such improvements. If they are not met, then some of the other benefits will not be realized to communities in the primary impact area.

With the expansion of population and human activity through construction and following in the operations phase of the dam, fire protection, too, will have to be expanded. A more regularized service, in addition to expanded volunteer forces, must be planned and implemented. While this was called for in the previous chapter outlining changes without the dam, it should be noted that the construction and operation of the dam will bring about the need more rapidly as well as increasing the need for more speed and versatility with men and equipment.

From the standpoint of population physical well-being, then, the Days Creek Dam will have major influences. It will not be a stimulus to significant new growth but it will contribute to growth. The population concentration and substitution in the upstream area are major in terms of restructuring subsequent social ties in and between communities. The dam will increase the need for all critical services: medical, safety, law enforcement, sanitation, water supplies and fire protection. These already are in need of improvement in the upstream area which means that the dam will bring them into critical proportions more rapidly than otherwise would be the case,

#### Enhancement of Livelihood

The most explicit impact of the dam on the South Umpquan's livelihood will derive from the employment of the construction period in which some people of the South Umpqua will participate, from the operations phase and the new alternative for recreation and associated

enterprise, and from the relocation of approximately 350 people who presently reside in the dam and reservoir's path. Other areas of socio-economic impact are taxes, farming, land and property values, and housing.

Just as the immediate economic benefits and costs will be distributed differentially among the South Umpquans, so will the social impacts that affect livelihood. Local perceptions of changes to come from the dam do not always match those of planners and other professionals. Still, peoples' beliefs and values have strong affects on their realization of alternatives and their subsequent adjustments. In this sense then, their attitudes and sentiments are quite realistic.

The dam will provide some employment alternatives for people in the area but it will not be as great as some suspect. Contract crews often are filled outside the construction area and the lesser skilled, more temporary vacancies are open to local people. For this reason, and the fact that the construction force is not an extremely large one, the construction of the dam is not expected to have major employment benefits to the people of the South Umpqua. It is anticipated that some related job vacancies will occur, in addition to those in the construction per se (cf. Interview: Douglas County Employment Division 1976).

The operation of the dam is anticipated to offer more employment (cf. Gruen and Gruen 1975), but this will occur mainly downstream from the primary impact area. It will occur because of improved circumstances for the placement of industry or its expansion. Subsequent recreational

developments in the upstream area are geared to the development of facilities. Experience shows these to come 3-5 years after completed construction of the dam and reservoir (cf. Hogg and Smith 1970), depending on agency interest and the availability of funds. A significant upstreamer involvement therefore will be delayed. In fact, it is quite possible that newcomers with capital will be the ones to participate most in the related recreational commerce, at least from a proprietor standpoint. Ironically, people in the upstream area expect this also.

Peoples' attitudes and expectations would appear to be quite realistic. Few saw explicit employment prospects for themselves in association with the dam's construction or operation. In the upstream area, many people are retired and therefore seek no employment. Some of the unemployed and self-employed are quite opposed to the dam and state a refusal to work on it. Most respondents indicated an awareness that employment circumstances would improve slightly but did not see it as either significant for the area as a whole or for themselves in particular. A strong commitment to area, community or neighborhood generally carried with it an optimism for the future economy irrespective of the dam. Those opposed to the dam viewed it as the major culprit in the future benefits of the area. Downstreamers did not see specific employment benefits for themselves, even though they viewed the dam's presence to heighten the employment picture slightly.

Other than the loss of farming land in the dam and reservoir area, little change from the dam can be expected in farming practices

or the already established tendencies for changes in the agricultural picture, i.e., a decrease in the number of small farms particularly. Moreover, since county regulations demand current usages to prevail, we do not expect major changes except where zone change pressure might be directed in the Canyonville to Days Creek area.

Downstream agriculture is more extensive and less individual-operator centered than upstream agriculture. While our sample of farmers indicated more downstream subsistence farming by individuals, it is nevertheless overridden by extensive holdings not so represented. Upstreamers are, by and large, not irrigators, while downstreamers are over-irrigators.

More per acre subsistence farming is practiced upstream. Grazing also is a dominant feature of upstream agriculture which requires less abundant land yield and allows reasonable reciprocity and compatibility with adjacent forested lands. The loss of 4,270 acres of farm land upstream because of the reservoir dimension amounts to an infinitesimal portion of the county's land area, a loss of only .1% of the county's total agricultural acreage. This loss nevertheless will further decrease the number of small farms in the county and thereby contribute to an on-going process of reduction. So far as the upstream area is concerned, it constitutes a major alteration of present subsistence practices. While this may not be significant from the point of view of economics and those whose reference is the productivity of the county as a whole, it nevertheless eliminates a major observable characteristic of the livelihood quest in the area above Days Creek.

Taxes constitute another major socio-economic concern of the South Umpqua residents. Of major importance in this regard is the support for schools. District #15 in Days Creek will be a prime beneficiary of the dam's construction since it is anticipated that costs would drop \$9-10 per \$1000 valuation. Little effect is anticipated in the remainder of the county. The Days Creek region is anticipated to witness new housing developments, increased valuation of present property and little requirement for new facilities for construction crews. District #15 now has relatively high taxes because of publicly owned land and tax deferrals on forested and agricultural land. The loss of additional base from the reservoir, it is felt, would be offset by these other growth factors. Should Days Creek be required to construct new facilities for the high school, however, increases in taxes would be substantial.

While the loss of private lands would mean that back taxes would not be collected and future taxes would be lost, few worry about it at the present time. The offset has not been calculated and is dependent upon numerous variables. People generally have not given this much thought.

Relocates as a population will of course feel the greatest socio-economic hardship from the dam. At whatever present compensation might be offered for loss of their lands and homes, etc., they feel that the years immediately following could more than eat up what early equivalence they might have achieved. Real costs of relocation are at least matched by social losses.

Relocates generally feel that their present jobs are threatened,

particularly those whose locus of employment is in the reservoir area. Subsistence farmers feel this most intensely, especially retirees who augment their incomes by such farming. Some others who are forced to move say that they will be forced either to travel greater distances to work, or to give up present upstream jobs and seek employment elsewhere. A few, who now commute downstream to jobs, might relocate closer to their work and thereby lessen costs in time and energy spent, but the reasons for their present commuting tie back to a strong preference for the area of their residence in the first place.

A social cost would then develop for any economic benefits. Thus nearly all relocatees, irrespective of present employment, feel that they are forced to sacrifice in some way relative to their employment or livelihood quest.

Socio-economic effects of the dam on present industry and commerce in the South Umpqua are differential. The timber industry will not suffer loss of forests and will benefit from improved flow conditions downstream. Such benefits range from prospects for plant expansion to a lesser degree of work stoppage from flood conditions. While some traffic congestion will delay log traffic out of the South Umpqua during construction, subsequent highway improvements around the reservoir will aid industry. As previously mentioned, little change will occur in agriculture and in related food and kindred products industries. Improved downstream conditions will accrue general benefits to all industry.

Most pronounced for the Days Creek Dam will be its effects upon recreation and tourism. Downstreamers will use the facility but on the

basis of it being an alternative to already diverse activities. More frequent usage will be by stayers, particularly people in Canyonville. The type transition observed in Sweet Home-Foster, Oregon surrounding Foster Reservoir is anticipated at Days Creek, but perhaps on a more modest scale. People in the Tri-City area also are expected to make use of the reservoir. Much of this usage will depend upon the development of boat launching sites, picnic areas and camp sites, along with public accommodations such as grocery, restaurant and beverage outlets.<sup>1</sup> As noted in Chapter III, the upstream South Umpqua is deficient in county and state park facilities now. Significant recreation and tourism benefits depend upon still other public expenditures.<sup>2</sup>

There are many contingencies in the future circumstances of Days Creek Dam enhancing the livelihood of South Umpquans. With the exception of the major long term effects on relocatees, the two most apparent forces of long term socio-economic effects are directed downstream in terms of lifting some constraints on industry and agriculture and upstream to recreational developments. Short term socio-economic effects are most pronounced in Canyonville and Days Creek and are keyed to the construction period. Increased public costs are associated with the

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1. As yet the implicit conflict between flow augmentation in summer months and recreational usage of the reservoir in the same period has not been resolved. This should be considered as a factor in overall benefit constraints.
  2. We should note that the name, Days Creek Dam, implies that a creek, rather than the South Umpqua, is the source of the reservoir. Insofar as highway 227 is not a major east-west arterial so that the dam and recreational facilities are observed easily by tourists on I-5, we would suggest a different, more attractive name for the dam. "Chief Umpqua" might be appropriate.

provision of increased services reviewed in the previous section of this chapter.

### Community

Significant changes in communities are projected for the area immediately adjacent to the dam, including Canyonville. Relocatees will field the major social changes by being forced from their current community positions and, for many, going through the process of resocialization to new areas and occupying a newcomer-stranger role in their new environments. Few social changes in communities downstream are anticipated. Structures are to remain in a mode of increasing non-articulation as population and economic growth continue irrespective of the Days Creek development.

Long term effects in the community functions of the upstream area therefore pertain to the stayer population and their relationship to subsequent immigrants who come either to settle immediately adjacent to the area's new recreational opportunities, or to escape the circumstances of the more crowded urban and suburban life they have experienced. The dam will make the prospect of isolation in the upper South Umpqua less possible. The bucolic rural atmosphere of river front lands above Days Creek will be gone and the isolation still possible will occur mainly in the forested upstream reaches near Jackson Creek, above Tiller.

It has been noted that all of our samples perceived that the dam would increase recreationalists and that this increase was felt to affect changes in local areas. Stayers anticipate changes of a considerable magnitude and well they should. Such expectations have been shown to

heighten sensitivity to novelities.

It is anticipated that the first wave of migrants will consist of construction workers and those seeking employment with construction, as well as a few entrepreneurial speculators anxious to capitalize on the presence of construction activities. Housing limitations in Canyonville and Days Creek will limit settlement of members of this wave during the construction period. An aura of temporariness and "ad hococracy" will pervade this early period, the result of which is an increase in impersonalism in human relations.

Subsequent, post-construction migration will entail a great deal more stability and local area permanence. Still, housing limitations will restrict numbers. The type of people moving to the upstream area will mirror to some extent the characteristics of the departed relocatees. In fact, some relocatees will attempt to resettle in the westward valley section from Days Creek to Canyonville. The addition of new migrants who will manifest urban-escapee or recreationalist-developmental traits and attitudes will substitute for previous numbers of departed relocatees. Some retired, predominantly urban background immigrants are expected in the area but the continuing absence of a traditional old-timer element will be felt and the addition of more developmentalist orientations will also be made known.

The results of this process of population replacement and substitution should manifest more concern with neighborhoods and area and more efforts toward community development and renovation to make full use of the new recreational resource in the area. As occurred in Sweet Home (Hogg and Smith 1970) we project efforts in Canyonville to formalize

community government, to reorient the community image in order to attract more affluent and permanent settlers as well as tourist dollars from the interstate freeway.

Family and kin patterns of involvement will not be altered markedly by the Days Creek Dam. Claims will be made that the reservoir and new alternatives provide a bad influence on youngsters but this situation will simply amount to the selection of another form of diversion for them. The major disruptive effects are to occur among relocatees.

Voluntary associations are likely to receive little, if any, effect in the downstream area and only moderate influence in the upstream area. While the South Umpqua Historical Society will lose some local membership because of relocation and some antiquities because of construction, it will remain viable in the face of the dam. Community organizations, especially service groups in Canyonville, are expected to devote energy and resources to maximizing the Days Creek Dam and to pushing for a new community image. Little effect is expected to occur in people's inclinations for association membership or participation. While some new emphasis will develop, e.g., community development and recreation, levels of organizational support should remain substantially the same. Social and religious organizations will be predominant. More pragmatic attitudes in social organization memberships, like those that now prevail downstream, should be anticipated.

Schools and other major institutions in the upstream area are scheduled for some marked changes. Most obvious is the movement of the Milo Academy; a new location cannot be predicted at this time. Days Creek administrators project an increase of 100 additional elementary and secondary students and substantial crowding in their high school section. They project a need for 9 more teachers, from 21 to 30. They anticipate the need for a new facility if the dam is built, at a doubling of the local budget. They indicate water supply problems, noise from the highway as a distraction and danger from increased traffic as construction period problems, some of which will persist into operation of the dam. Pressures for school crowding at Tiller and in Canyonville are not anticipated by officials, although Canyonville could experience them if sufficient numbers of construction worker families are able to locate there. The Tri-City area schools will experience some additional numbers of students also but other downstream schools will not.

The relocation of the Tiller Ranger Station, as discussed previously, is a very important factor in the maintenance of the above pool region's social integrity as well as its economic viability. Its loss to the upper area will be a major social cost. Its placement in Canyonville would be another factor in population concentration and Canyonville's growth. Placement of the station at Jackson Creek would minimize the loss of a social nexus. Splitting the administrative and field services of the center also will entail social costs to the integrity of the upstream area.

As described previously, we project greater local area use of the reservoir for recreation than by outsiders. Hunting and fishing will remain as major outdoor recreation sports but substantial new emphasis on boating will develop among upstreamers. A new commitment to water based recreation is anticipated for upstreamers.

Changes in community that are attributable to the Days Creek Dam therefore will be substantial in the upstream area. Only extremely limited community effects are anticipated downstream. The dam will contribute to greater degrees of diversity and specialized activity in the primary impact area. In some cases this will mean greater community structure articulation and differentiation of people. In the long run, and during the boom of construction, non-articulative tendencies are projected.

#### Communications

The communications networks for the primary and secondary impact areas will undergo various transitions with construction of the proposed reservoir at Days Creek. In the primary impact area the most immediate transportation improvement that must be made is to Highway 227 from the damsite to the city of Canyonville. The present condition of this roadway has been discussed in an earlier section. Relocation of 227 will be necessitated by the construction of the reservoir from the damsite to Tiller. Current plans call for the movement of the highway to the north beyond Days Creek to follow on or near the ridgeline. Sufficient improvements will have to be made to handle the expected

increase in traffic, especially during the construction phase of the project. Access points to the reservoir will have to be added to the configuration of the road, also. Depending upon the number of sight-seers, recreationalists, residents, and the extent to which such operations such as logging are practiced after dam construction, measures will have to be taken to insure adequate upkeep and to insure that potential hazards are minimized between fast moving trucks and relatively unalert recreationists and "Sunday" drivers.

The lack of available housing in the upstream area will also compound the traffic congestion during dam construction. Workers will be forced to commute and they will aggravate an already potentially dangerous situation. The increases in traffic and its associated noise has already been indicated as a concern by officials at Days Creek School.

Various agencies of Douglas County government have expressed a need for transportation and water resource improvements before the presently depressed economy can hope to achieve any gains. Flooding will have to be combated and summer flows increased on the South Umpqua River before new industry will be attracted to the central part of the county. Once this occurs, subsequent transportation improvements and facilities will be necessitated downstream. Without these improvements, some agencies feel that industry may well choose to locate elsewhere, leaving the economy to a slow recovery (Interview: Umpqua Regional Council of Governments 1975).

As mentioned in Chapter V, east-west transportation lines currently need improvement. Expansion must accompany improvements to meet anticipated future needs. Some county agencies believe these expenditures must be made, regardless of any water resource development. North-south networks are adequate and would probably continue to fulfill any county requirements.

It is not impossible that the county may try to re-initiate commercial air service to its residents. If at any point in time this becomes a realization, then improvements must be made in terms of expanding existing air fields or constructing new terminals. Rail may also possibly receive due consideration by county, as well as state planning agencies.

#### Innovation

Only in the past several decades has the existence of human factors in water resource development become accepted and given appropriate consideration. In the first portion of this chapter it was noted that technological innovation and developments provide impetus for cultural change and that such change is implicit in the developmental process. Thus, any change that occurs will in some manner affect the quality of life and social well-being of a given population.

One of the most significant innovations and developments to occur on the South Umpqua in this decade would be the reservoir at Days Creek. Its impact upon the population in the upper basin will not be unlike that of previous historical developments, such as the railroad, in

terms of its dynamic and diverse effects upon the life styles of South Umpqua residents. As with the railroad, the effects of Days Creek Dam will be differentiated on the basis of people's geographical proximity to the project. It will require further human innovation in order for adaptation to take place.

The upstream area, comprised of stayers and relocatees, is where the most significant and dramatic impacts on the quality of life and social well-being will occur. Relocatees will be thrust from an environmental circumstance which represents to them an emotional alignment between quality of life and a desired style of life. Their ability to adapt and assimilate other cultural-environmental circumstances can only be alluded to with the existing data base. Natives and long-time residents will have paramount difficulty in making such adjustments. They will most likely seek out similar environmental niches in which to reside. The physical move itself may have harmful effects on them. Newcomers and more mobile residents who show better capacities for adaptability, such as previous experience in several different communities, better educations and younger age, are more able to cope with change.

Stayers, and other residents at Canyonville and Days Creek, will be in the best position to cope with the project initially. Although some may look at the dam as having a deleterious effect upon the environment of the South Umpqua in terms of the land it will inundate, they nevertheless perceive that their quality of life and social well-being situation could be enhanced by economic benefits. How they

perceive these benefits and what actually occurs may be of different circumstances.

The population of Days Creek will see the most profound changes in the quality of life and social well-being situation. Their seclusion will be broken by the onset of the construction forces and the subsequent recreational and new residential entities. Their cultural-environmental circumstance will also be altered, although they are remaining in the same location. Corresponding degrees of stress and maladaptation would be projected in this case. Lifestyles will become altered and alliances will shift as people reorient themselves.

Even though downstreamers are farther removed physically from the proposed project, their quality of life and social well-being will be subjected to some alteration, although it may be of less consequence and significance than for the upstreamers. Flood control will be the most immediate benefit. Augmentation of the summer water flows of the South Umpqua also will be an aesthetic improvement. Such enhancements will have a corresponding decrease in desirability of the upstream area, i.e., summer draw-down of the reservoir for downstream augmentation will leave exposed mud flats.

The overall quality of life and social well-being for downstreamers are subject to more external innovative circumstances than that of the upstream area. Many of these and their circumstances have been discussed in Chapter V.

By the end of the century there will be a host of innovations, both large and small, that will effect the quality of life and social

well-being of South Umpqua residents. How well such innovations and developments can be internalized is difficult to either predict or project. In any case, technological development becomes subject to hosts of human and ethical problems. Perhaps we should ask ourselves how far these innovations will progress before the cultural-environmental circumstance becomes altered beyond repair.

## CHAPTER VII

### SIGNIFICANT SOCIAL EFFECTS AND EFFECTS CATEGORIES

The success of a technological development is eventually determined by the extent to which the cultural-environmental setting can absorb its impact with a minimum of disruption. Currently social scientists understand more about technological development, per se, than they do of its influence on the cultural-environmental relationships.

This chapter details two required features of the Days Creek SEAR. It identifies the significant effects of the Days Creek Dam on the social systems in the South Umpqua impact areas and it assesses the relative significance of effect categories covered in the social effects profile.

#### Social Effects

The greatest social effect of the Days Creek Dam is in relation to the relocatee population. Their entire range of social and cultural environments are affected and many will face significant future difficulties in obtaining new homes, property, jobs and social ties.

Relocates show considerable anxiety over their prospective moves. This anxiety has led to embitterment and hostility among many of them for all intrusive government programs. It is heightened for many because they feel trapped, unable to improve, or plan to develop their lands until the issue finally is resolved. The powerlessness felt by the relocatees on an individual level is to some extent mitigated by some people's participation in a voluntary association to stop the dam. They nevertheless are greatly disturbed by the prospect of loss of lands, the

breakup of kin ties and neighborhoods, their extraction from communities, and difficulties foreseen in resettlement, reemployment and social reestablishment. Their fear is justified.

The socio-economic situation of Douglas County shows that relocatee anxiety stems from a realistic appraisal of their situation. They desire to stay in Douglas County with its known unemployment, poor housing and lack of available agricultural land. They insist that they must be fully compensated not only for property lost, but also for moving costs and resettlement allowances.

Two major institutions of the upper Umpqua region also are scheduled for relocation. These are the Milo Academy, whose plans are not yet developed as to where it will go (although the possibility is good that it will move from the upper South Umpqua area), and the Tiller Ranger Station that employs a substantial number of people in the area. The Tiller Ranger Station is anticipating a number of alternatives so far as its future location is concerned. These include the movement of the station farther up river, the use of a smaller service facility up river and a move of the major facility to Canyonville. The decision is yet unclear.

Another very significant set of effects is anticipated in the area and communities immediately adjacent to the proposed dam facility. While it is clear that a lack of available housing will force many in the work force to commute to the damsite (many workers prefer settlement in larger growth areas for the services offered), perhaps from Roseburg, Grants Pass or even Medford, what housing does exist in Canyonville and Days Creek will have great pressure on it. New housing starts or trailer facilities

will be pushed in the face of sanitation regulations.

Days Creek will experience crowding, heavy traffic, noise and the presence of some crime and other conflict during the construction period particularly. It will also experience a strong carryout beverage and light grocery business increase during the construction period.

Canyonville will receive more direct and longer term business increases. Law enforcement problems are anticipated to increase. Canyonville also will experience settlement of some of the construction force and housing will be at a premium. Schools, too, will experience some additional crowding but lack of available housing will limit this pressure.

Post construction will mean other significant changes for these two communities. Days Creek will be a staging area for recreators and will have high seasonal demand for light supplies in terms of groceries, fishing tackle and bait, etc. Canyonville will experience a similar pressure but should exercise caution in over-promotion since the distance from the reservoir will be greater and campers, picnickers and boaters will use Days Creek first for replenishment of supplies. Canyonville is likely to experience a new thrust of promotions for maximizing its "gateway status" to the Days Creek Dam and the South Umpqua recreational area. In the long run it will experience immigration of more retirees and affluent recreational proponents from urban areas.

Some growth is anticipated for the above pool area-- Tiller and beyond. This will occur mostly on a seasonal basis because of the presence of people seeking summer recreation. Use of services in the above pool area will increase and some sales pressure on remaining private land is

anticipated.

The loss of agricultural lands constitutes another major effect of the Days Creek Dam. In cultural terms this means a major change in subsistence oriented activities of the upper South Umpquans. The dam constitutes a major new technological innovation to which people and environment must adjust. In more local terms, it necessitates that strong new planning schemes be developed. Present planning strategies, largely reliant on zoning, are most vulnerable to changes from both the public and private sector pressure.

County government will have other problems as well. Law enforcement will be made difficult and costly during the construction period. Fines and forfeitures will not offset the cost to the Douglas County Sheriff's Office, although they may increase in Canyonville itself. Post construction highway patrol will be necessary. Highway 227 will require renovation, especially widening, and additional patrolmen and vehicles will be required to control the area. The Sheriff's Department is quite aware of these requirements.

In addition to law enforcement, Douglas County will be required to expand or to advocate expansion of health, sanitation, educational and other services in the southern county and the upper South Umpqua. It also will be required to take a much more aggressive beforehand stance to planning for growth in the southern County and the upper South Umpqua.

The dam's construction and subsequent operation is bound to mean a broad ranging dissatisfaction for some people in all parts of the South Umpqua. In addition to heightened bitterness and hostility among

relocatees, it will have some negative attitudinal effects on stayers and downstreamers. This effect stems largely from the facts that too many people personalize the dam's probable benefits and the immediate boom of construction in the primary impact area is inevitably followed by a recessed condition of the economy locally. Stayers thus are likely to feel that the stated benefits didn't materialize for them, that too few profited and that local area economic gains are less than that promised. Downstreamers, too, are likely to complain that the dam didn't do all that was promised and complain when low flow augmentation lowers the pool and limits its recreational use. Upstreamers are likely to complain of pool lowering because it limits their prospects of profits while offering benefits exclusively to downstream persons and institutions. In general, however, most people will feel that the dam was a good thing even though it did not meet expectations.

Finally, the Days Creek Dam for the upstream area will constitute a major cultural change. It is to represent an alternative not heretofore realized and will increase diversity and orientations of the population. Size is not to increase markedly. The lifestyle of upstreamers will be altered by the presence of newcomers and by their participation in the new livelihoods and recreation offered by the Days Creek Dam. Economic gains will be slight for the majority of the upstreamers. Most will participate in the new recreational features of the South Umpqua.

The Days Creek Dam will not have significant social effects on the central valley zone of the South Umpqua. Other than the periodic use of new facilities that it might provide (and many of these must come from the

County budget), people in the mixed social and cultural lower regions will not be affected in social terms. The work force during construction is not large enough to have a significant impact on the lower region. Such social changes as may occur from the later period will be masked by already changing and mixed social circumstances of the lower sub-basin. As previously mentioned, county government will face new requirements but, barring catastrophe, the average person in the downstream area will not have his or her social life significantly altered by the Days Creek Dam.

#### Effects Categories: Relative Significance

Three different sets of effects categories have been employed in this research. They are not mutually exclusive and in all ways are overlapping. Each set provides a slightly different perspective on the social effects of the Days Creek Dam. The sets are: (1) the original matrix of variables, (2) summary sub-system categories in the cultural system model offered in Chapter I, and (3) instrumental cultural functions discussed in Chapter 3 and in the preceding chapters on with and without dam projections.

#### Matrix Variable

The variables employed in the original matrix constituted the initial perceptual and analytical framework for the research. Their logical combination into balanced sets of more general categories was made difficult because in some cases the variables were social processes and in other cases they were specific content items of behaviors and attitudes. While they were generally amendable to inclusion into the cultural sub-system categories, they were not originally so placed. For these reasons

they are assessed here in terms of their original pattern in the matrix.

Each variable in the following table is given a summary designation of its effect significance. These are shown in terms of the following categories: insignificant, moderate significance, extensive significance and questionable future circumstance. The reader should exercise considerable caution in using the summary designations as hard and fast details of fact on which quick conclusions or actions can be based. In some cases the summary designation is made in reference to conflictive information or on the basis of attitudinal ambivalencies in our data base. In all cases these judgmental summary designations should be used only in reference to the fuller explication contained in the body of the report. The value of the summary designations comes as a heuristic device. The implied simplicity should be acknowledged and recognized to pertain to the anticipated effect of the Days Creek Dam in the future of the South Umpqua region as we presently are able to offer a qualified judgment about it.

Each matrix item is considered in terms of its pertinence to the downstreamer, stayer and relocatee population categories from which data were derived through the administration of the questionnaire, by open-ended interviews and from agency and other institutional contexts. The reader is reminded that the summary designations pertain to the anticipated future of each population category and that these summaries are not summaries of data presented in Chapter IV, the Present Social Situation.

KEY: Ins: Insignificant Effect  
 Mod: Moderate Effect  
 Ext: Extensive Effect  
 Que: Questionable Effect  
 N.A.: Not Applicable  
 Ext(Que): Denotes extensive effects of which the precise nature cannot be presently ascertained.

TABLE 55  
 MATRIX OF SIGNIFICANT EFFECTS CATEGORIES

| <u>Effects categories</u>                         | <u>Effects indication</u> |               |                  |
|---|---------------------------|---------------|------------------|
|   | <u>Downstreamer</u>       | <u>Stayer</u> | <u>Relocatee</u> |
| Economic variables-individual involvement         |                           |               |                  |
| Present job and occupation . . . .                | ins.                      | ins.          | ext.             |
| Labor force characteristics . . . .               | ins.                      | ins.          | ext.             |
| Employment opportunities . . . . .                | ins.                      | mod.          | ext.             |
| Real income and distribution . . . .              | ins.                      | mod.          | ext.             |
| Housing   |                           |               |                  |
| Quality and size . . . . .                        | mod.                      | mod.          | ext(que)         |
| Availabilities . . . . .                          | mod.                      | mod.          | ext.             |
| Relocation assistance desired . . . .             | n.a.                      | n.a.          | ext.             |
| Place of relocation . . . . .                     | n.a.                      | n.a.          | ext.             |
| Property ownership                                |                           |               |                  |
| Size and value . . . . .                          | mod.                      | mod.          | ext(que)         |
| Use of property . . . . .                         | ins.                      | ins.          | ext(que)         |
| River frontage . . . . .                          | mod.                      | ins.          | ext(que)         |
| Water needs and problems . . . . .                | ext.                      | ext.          | ext(que)         |
| Available replacement property . . . .            | n.a.                      | n.a.          | ext.             |
| Property replacement assistance desired . . . . . | n.a.                      | n.a.          | ext.             |
| Problems anticipated with replacement . . . . .   | n.a.                      | n.a.          | ext.             |
| Transportation                                    |                           |               |                  |
| Journey to work . . . . .                         | ins.                      | mod.          | que.             |
| Travel for shopping . . . . .                     | ins.                      | mod.          | que.             |

Effects categoriesEffects indicationDownstreamer   Stayer   Relocatee

## Farming activities

|   |           |      |            |
|---|-----------|------|------------|
| Type of farming activity . . . . .          | ins.-mod. | mod. | ext.(que.) |
| Irrigation practices and needs . . . . .    | ins.      | ins. | que.       |
| Willingness to pay for irrigation . . . . . | ins.      | mod. | que.       |

## Economic variables

|  |      |      |            |
|--|------|------|------------|
| Perception of economic structure<br>in area . . . . .                    | mod. | ext. | ext.       |
| Anticipation of future economic<br>benefits to self and others . . . . . | ins. | mod. | ext.       |
| Dam/no dam alternatives . . . . .  | ext. | ext. | ext.       |
| Property taxes and other local<br>taxes . . . . .                        | mod. | ext. | ext.(que.) |

## Political variables-institutional

|  |      |      |      |
|--|------|------|------|
| Residents' participation in<br>politics . . . . .                                      | ins. | ins. | mod. |
| Residents' perception of political<br>opportunity structure in local<br>area . . . . . | ins. | mod. | ext. |
| Residents' attitudes toward government<br>at all levels . . . . .                      | ins. | mod. | ext. |

## Social variables

|  |      |      |      |
|--|------|------|------|
| Neighborhood, community and area<br>relations . . . . .  | ins. | mod. | ext. |
| Interaction with kin; location of<br>kin . . . . .   | ins. | ext. | ext. |
| Neighborhood, community and area<br>preference for residence . . . . .                           | ins. | ext. | ext. |
| Present attitudes toward neighborhood,<br>community and area . . . . .                           | ins. | ext. | ext. |
| Attitudes toward, and perceptions of,<br>change in neighborhood, community<br>and area . . . . . | mod. | ext. | ext. |
| Attitudes toward increased<br>recreationists in area . . . . .                                   | mod. | ext. | ext. |
| Attitudes to family and kin;<br>preferences for involvement with kin . . . . .                   | ins. | ins. | ins. |
| Participation in voluntary<br>organizations . . . . .  | ins. | mod. | ext. |
| Voluntary associations preferences . . . . .   | ins. | mod. | ext. |

Effects categories

Effects indication

|  | <u>Downstreamer</u> | <u>Stayer</u> | <u>Relocatee</u> |
|--|---------------------|---------------|------------------|
| Recreational preferences . . . . .                                     | mod.                | mod.          | ext.             |
| Attitudes toward out-migration . . .                                   | ins.                | mod.          | ext.             |
| Attitudes toward migrating into<br>area . . . . .                      | ins.                | mod.          | ext.             |
| Community which provides norms and<br>values . . . . .                 | ins.                | mod.          | ext.             |
| Community by which one measures<br>one's own accomplishments . . . . . | ins.                | mod.          | ext.             |
| Perceptions of social opportunity<br>structures . . . . .              | ins.                | mod.          | ext.             |

Social services availability and  
provision

|  |      |      |      |
|--|------|------|------|
| Schools: number, size, location,<br>capacity for growth or<br>contraction . . . . .                | ins. | mod. | ext. |
| Churches: number, size, location,<br>denomination, capacity for growth<br>or contraction . . . . . | ins. | mod. | ext. |

Resource utilization

|   |      |      |      |
|---|------|------|------|
| Residents' perceptions of what man's<br>role should be in natural resource<br>utilization and modification. . . . | ins. | mod. | ext. |
| Residents' perceptions of whether<br>they are leading the kind of life<br>they prefer for themselves . . . .      | ins. | ext. | ext. |
| Engagement in historical<br>preservation activities . . . . .   | ins. | ins. | ins. |
| Attitude toward historical<br>preservation programs . . . . .   | ins. | mod. | que. |

Water resources development variables

|  |      |      |      |
|--|------|------|------|
| Attitudes toward water resource<br>developments . . . . .                  | mod. | ext. | ext. |
| Perceptions of changes derived from<br>water resource developments . . . . | mod. | ext. | ext. |

Environmental variables

|   |      |      |      |
|---|------|------|------|
| Land use patterns and plans . . . . .   | ext. | ext. | ext. |
| Noise: residents' perception of<br>noise . . . . .  | ins. | ext. | ins. |
| Visual quality of South Umpqua Area:<br>residents' perceptions of visual<br>quality . . . . . | ext. | ext. | ext. |

Effects categories

Effects indication

Downstreamer   Stayer   Relocatee

Population characteristics

|                               |      |      |      |
|-------------------------------|------|------|------|
| Population density . . . . .  | ins. | mod. | que. |
| Population movement . . . . . | mod. | mod. | ext. |
| Population health . . . . .   | mod. | ext. | ext. |

Individual adaptability to change

|  |      |      |      |
|--|------|------|------|
| Relocation . . . . .                                       | ins. | mod. | ext. |
| Occupation flexibility and<br>independence of property . . | ins. | mod. | ext. |
| Social-psychological                                       | ins. | mod. | ext. |

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Cultural subsystems

The behavioral and attitudinal dimensions of cultural subsystems employed in the general design of the research constitute a second set of effects categories. They closely relate to the summary categories of matrix variables but, as previously noted, exclude external features of individual personality as well as physical features of the environment.

The stronger and more numerous effects of the Days Creek Dam will be realized within the economic aspect of the cultural systems of the South Umpqua. These have been viewed in detail in the previous chapter and in the first section of this chapter. Both the attitudinal and behavioral dimensions of the economic aspect are influenced, but most of the economic effects will be behavioral constraints or requirements that emerge from the livelihood functions in the area.

Equally numerous effects of similar magnitude are to be realized in the social subsystem of the South Umpqua cultural systems. Both the attitudinal and behavioral dimensions are influenced so, in actuality,

one can argue that impacts on social subsystems are more pervasive than in the economic subsystem.

The least effect on cultural subsystems occurs in the aesthetic and religious patterns of the South Umpquans. Moderate effects through relocation of church facilities occur but basic religious beliefs and perceptions of beauty and expression are not altered in existent populations. The passage of time, conditions of a changed habitat and the replacement of present people, can bring such changes in these subsystems of the cultures of the South Umpqua.

Impacts on cultural subsystems thus show major relationships to (1) property and the distribution of goods and services and (2) territorial unit relationships and associations, and then to (3) patterns of control and order to human behavior. Minor to insignificant relationships occur to organizations and attitudes pertaining to religious devotion and expressive-emotional attachments to phenomena.

Aside from changes within the cultural systems per se, there are pronounced interpersonal and value conflicts that emerge in the face of impending construction and through the phases of construction and operation of the dam that are to follow. These conflicts occur mainly as a result of the cultural mix that is to follow the development. Some of the chief conflicts revolve around problems of high expectation and later dissatisfactions with the parameters of development, in conflicts of interest over best uses and purposes of the altered landscape and the new facilities, over the images and developmental goals of the communities involved, as well as the emotional turmoil for some that follows the

loss of their lands, friends and former communities.

With respect to some of the research design features, the population categories of downstreamers, stayers and relocatees have only limited integrity and do not represent actual cultural or social types of people. The most integrity occurs in relation to those called relocatees whose common circumstance evokes similarities in responses that otherwise would be more diverse. The notion of downstreamers embraces such a vast number of diverse people as to be of little explanatory value as a cultural type or tool. The utility of these population designations pertains in the main to the river and the planned development, but little to actual clustering in values and behaviors.

#### Instrumental Cultural Functions

A third set of effects categories is developed out of the instrumental cultural functions (cf. Smith and Hogg, 1971) employed as a framework to examine the cultural-environmental interplay of the basin both as it now exists and as it is to be effected by the construction and operation of the Days Creek Dam. The foregoing descriptions in Chapters II and IV, and the effects analysis in Chapters V and VI, have discussed the five instrumental cultural functions at length. Their relative significance as effects categories of the Days Creek Dam can now be assessed. Each function carries different degrees of significance so far as impacts of the dam are concerned.

As in the case of the economic and social cultural subsystems just discussed, the function of (1) livelihood and subsistence quest and (2) community organization and ethos have the greatest number of and most

pervasive influences upon them. For those people who will remain in the primary impact area, (3) innovation functions are called for in significant ways. Another function, (4) population physical well-being, is not seriously influenced, although the Days Creek Dam has been shown to place additional demands on and for critical services that may tax levels of well-being now in evidence. While (5) communication is the least effective of the five functions, it nevertheless will prove to be important to subsequent resolutions of conflict between culturally mixed populations with different goals, and to future benefits in other instrumental areas of cultural patterning, i.e., livelihood, community development, safety and health and law enforcement.

Within the domain of livelihood functions, the chief effect for the whole area will be in the provision of new opportunities for and the diminution of some present limitations on economic growth in the flood plain. In the primary impact area, the major effects will be realized in terms of negative consequences for relocatees and in new employment and other economic alternatives for stayers and subsequent newcomers as they face the recreational opportunities and challenges provided by the dam and related facilities. Community effects are not significant downstream from Canyonville, except as accelerators of growth in the Tri-City area, but will be very significant in the upstream area. Not only are the community-pertinent ideas and behaviors of relocatees to be impacted; subsequent developments will restructure communities throughout the primary impact area. Population well-being, as assessed in terms of growth and balance as well as health, etc., will not be affected

significantly. In fact, the dam may enhance this function slightly if awareness of already strained services is acknowledged and corrected. Sub-processes of population concentration and substitution will create other requirements for adaptation, especially in the community function in the upstream area. Communication functions are affected primarily in terms of the explicit transportation improvement required on Highway 227. This is, of course, important to the realization of other functions should the dam be built. Not so explicit or direct is the need for intercultural communication among stayers and newcomers in the primary impact area. Innovation functions generally relate to subsequent adaptation of populations of the area, particularly in the upstream region, and to changes in the quality of life and social well-being circumstances that are to prevail following construction. In order for a satisfying circumstance to develop for many of the stayers, significant innovations in values and attitudes must be accomplished. For many newcomers to the area, the changed configuration will be quite satisfying. Clearly the greatest demand for innovation by a population occurs for the relocatees whose cultural and personal survival are at stake. They face a total cultural system and function change that should not be understated or underestimated. Their quality of life and social well-being is severely threatened and promise for future satisfactions is limited indeed.

APPENDIX A

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2. Principal: Milo Academy, Milo, Oregon, 1975.
3. Principal: Canyonville Junior High School, Canyonville, Oregon, 1975.
4. Superintendent: Roseburg School District #4, Roseburg, Oregon, 1975.
5. Superintendent: South Umpqua School District #9, Tri-City, Oregon, 1976.
6. Director: Douglas County Land Department, Roseburg, Oregon, 1975.
7. Assistant Director, South Umpqua Region: Douglas Forest Protective Association, Roseburg, Oregon, 1975.
8. Deputy Assessor: Douglas County Tax Department, Roseburg, Oregon, 1975.
9. District Manager: Oregon State Employment Office, Roseburg, Oregon, 1975.
10. Douglas County Environmental Sanitation Department, Roseburg, Oregon, 1975.
11. Director: Douglas County Planning Department, Roseburg, Oregon, 1975.
12. Sheriff: Douglas County Sheriff's Office, Roseburg, Oregon, 1975.
13. Director and Staff: Umpqua Regional Council of Governments, Roseburg, Oregon, 1975-76.
14. Chairman: Douglas County Commissioners Office, Roseburg, Oregon, 1975-76.
15. Executive Director: Coos-Curry-Douglas Economic Improvement Council, Roseburg, Oregon, 1975.
16. Director: Douglas County Agricultural Extension Service, Roseburg, Oregon, 1975.
17. General Manager: Hanna Mickle Mine, Riddle, Oregon, 1975.
18. Public Relations Director: Roseburg Lumber Company, Dillard, Oregon, 1976.
19. Postmaster: Days Creek, Oregon, 1976.
20. Postmaster: Tiller, Oregon, 1976.
21. Employee: Myrtle Creek City Hall, Myrtle Creek, Oregon, 1976.
22. Employee: Canyonville City Records Office, Canyonville, Oregon, 1975.

23. Secretary: South Umpqua Historical Society, Days Creek, Oregon, 1976.
24. Director: Douglas County Museum, Roseburg, Oregon, 1976.
25. Staff: Douglas County Family Services Clinic, Roseburg, Oregon, 1975.
26. President: Herbert Lumber Company, Riddle, Oregon, 1976.
27. Building Inspectors: Roseburg City Hall, Roseburg, Oregon, 1976.  
Myrtle Creek City Hall, Myrtle Creek, Oregon, 1976.

APPENDIX B

NATIVE AMERICAN TRIBES OF THE UMPQUA, ROGUE AND SOUTHWEST COAST

Takelma. The Takelma are a linguistic isolate which have been divided into two mutually intelligible groups: upland and lowland. The lowland Takelma inhabited the upper portions of Cow Creek, a tributary of the South Umpqua River, the middle course of the Rogue River, and portions of the Illinois River. The upland Takelma resided near present day Jacksonville, and east, to the Cascade Divide which bordered on Klamath territory (Berreman 1937: 27).

It has been suggested that these people had frequent contact with the Northern California Shasta groups probably due to their proximity, general cultural similarities and patterns of intermarriage (Hodge, 1970B: 673-674). This aboriginal group seems an anomaly since they are practically surrounded by Athapascans and showed no phonetic or morphologic similarities with the language of either Athapascans or Sahaptans (e.g. Klamath) (Swanton 1968: 72-72). The Takelma, however, are probably the best culturally described group of any in the inland portion of the Umpqua or Rogue Basins (cf. Sapir 1907).

Chasta-Costa. Immediately south of the Takelma territory, occupying portions of the Illinois River just above its confluence with the Rogue, were a group of Athapascans known as the Chasta-Costa. Practically no information has been assembled on this group other than a dubious reservation population estimate taken in 1856 (Swanton 1968: 59).

Tututni. This Athapaskan group claimed territory from the lower Rogue River to the Pacific Coast. They have not been described with any accuracy. In fact, it has been suggested that the Tututni may represent a series of smaller groups or bands. It has become difficult to assign

status as a single tribe or as autonomous units (Berreman 1937:31). Hodge cites that these groups warred with one another without any loss or violation of any sense of tribal unity (Hodge 1907B:857). Swanton claims they were culturally similar to Upper Coquille groups (Swanton 1968:75). There is not enough information available, however, to ascribe any certain definitions of this group or groups.

Dakubetede and Taltashtuntude. Known as the Applegate and Galice Creek indians from their geographical location, these groups represent additional Athapascan stock in Southwestern Oregon. While they spoke the same dialects, it is thought that the Taltashtuntude culturally assimilated with the Takelma at some point in time (Swanton 1968:73). Others have surmised that they may have overrun the Takelma (cf. Hodge 1907B). This, however, is yet to be determined. Berreman has suggested that since both the Applegate and Galice Creek groups occupied similar territory, they be one group in all actuality (Berreman 1937:29). The Dakubetede, like the Takelma, are thought to have intermarried with the Shasta (Hodge 1907A:380).

Chetco. Still further south and living within the 14 miles of the Chetoc River upriver from the coast was another Athapascan group known as the Chetco. It is reported that they were once allied with the Tolowa (Athapascan sea-dwellers) of Northwestern California, although they differ slightly in dialect and custom (Hodge 1907B:249).

Molala. Little is known of the history of these Sahaptan speakers who are thought to have migrated from the Upper Deschutes region to the Willamette and Umpqua valleys as late as the 1780's as a consequence of

the Snake Indian Wars (Berreman 1937:45). Apparently they were formerly allied with Cayuse groups and showed some degree of linguistic affiliation with them.

A portion of these people settled in the Willamette Valley by pushing the Santiam from their occupied territory in the foothills and higher elevations of the Cascade Mountain Range toward the valley. Another portion chose the Upper Umpqua Basin. Swanton notes that they most likely came over the Cascades through the passes and settled in the Santiam and Umpqua basins. A portion of the Santiam intruders are said to have split off and to have traveled down the west side of the Cascades and into the Umpqua (Swanton 1968:69).

Yoncalla. Although classified as Kalapuyan speakers, the Yoncalla spoke a dialect that differed somewhat from the remainder of the Kalapuya groups of the Willamette Valley. Berreman suggests that, in fact, they may constitute a distinct tribal unit (Berreman 1937:23). While the exact extent of their territory is unknown, they are thought to have occupied a large portion of the southern Willamette Valley (at the higher elevations) and the northern portion of the Umpqua drainage (Berreman 1937:32). Some literature sources indicate that there may have been two separate bands (cf. Hodge 1907B). This may be correct when considering ecological differences of the Willamette and Umpqua drainages.

Kuitsh or Lower Umpqua. The term Lower Umpqua may be a misnomer since it may imply some connection with the upper Athapascan group. This group was comprised of Siudlawan speakers who were remotely connected with the Yakonan linguistic stock (Swanton 1968:65). Their location

has been fairly well described culturally and a rather lengthy corpus of their language has been collected.