



*sea grant program*

## INDUSTRY AND THE CALIFORNIA COAST

A SURVEY REPORT

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**INDUSTRY AND THE CALIFORNIA COAST**

**A SURVEY REPORT**

by

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EXECUTIVE SUMMARY  
USC SEA GRANT INDUSTRY SURVEY

This survey was conducted by the University of Southern California Research Institute for Business and Economics, the research arm of the Graduate School of Business Administration, in support of the US National Sea Grant Program. Sea Grant utilizes a multidisciplinary approach to enhancing national resources in marine related activities through involvement of institutions of higher learning in areas of education, research, and advisory services.

In order to determine if any recognizable trends could be established regarding utilization of the ocean or land along the California coast during the next ten years, questionnaires were mailed to 1,674 organizations. 312 were returned, and of these, 146 indicated they had growth or development plans involving the use of the coastal resources.

**MAJOR FINDINGS:**

1. One-half of the planned activity is anticipated to occur between Santa Barbara and the Mexican border.
2. One-half of the projected growth is anticipated to begin within the next two years.
3. Over 70% of the organizations will rely on internal funding for their activities.
4. Over 45% of those planning future growth were organizations representing land development and investment.
5. The majority of the coastal activity will involve residential-recreational development.
6. The greatest need for government assistance was felt to be in areas relating to land access and zoning, new legislation, and public information.
7. Both planning organizations and investment firms expressed concern with the impact of conservationist movements.
8. There is an expressed need for a consistent position and policy within and between public agencies and jurisdictions, e.g. consistent use of zoning codes and adherence to master plans.
9. A need exists for a centralized information system with the capability to summarize across agencies or functions as well as to provide in-depth data on specific topics.
10. While the smaller organizations surveyed indicated more extensive use of academic resources, the larger organizations are more likely to handle problems by increased staffing or retraining.





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## SECTION I

### OVERVIEW

#### A. Background

The primary objective of this survey is to discover and delineate possible trends regarding the projected utilization of California's coastal (land and sea) resources during the coming decade. Sponsored by the National Sea Grant Program (established by Public Law 89-688 on October 15, 1966), this study is one of a number of activities coordinated by the Office of Sea Grant Programs of the University of Southern California in its capacity as a Sea Grant Institute. The broader objectives of the national program are to provide support for: 1) training and education, 2) research, and 3) advisory services related to national goals concerning the development of marine resources.

The information to be presented was obtained from organizations in all of the major sectors of the coastal community. A formal questionnaire was sent to executive officers of those business organizations felt to be instrumental in the development of California's coastal resources. Subsequent to this questionnaire, a number of personal interviews were conducted with these officers to clarify the questionnaire data. In addition, personal interviews were conducted with officials of various state, county, and local planning agencies, as well as representatives of major banking and utility concerns.

#### B. Rationale

The intent of the questionnaire was to elicit information regarding the particular firm's projections for its future growth and new development throughout the ten year period. The resultant emphasis was thus one of forecasting the future activity rather than merely detailing current efforts. The data was collected and the results will be presented according to the following schema, indicating the broad sequential areas within which information was requested of each firm.

1. General geographical area(s) of interest. (See Figure 1.)
2. General Coastal zone(s) within the geographical area. (See Figure 2.)
3. Specific features within a coastal zone.
4. Time frame or planning horizon of future activity.
5. Scope and method of financing of future activities. Includes manpower, plant size, land and waterfront requirements, proposed sources of funds.
6. Anticipated problem areas and types of assistance in the solution of these problems desired from governmental agencies and the academic community.
7. Operational definition of the term "Multiple-Use".



Figure 1  
California Coastal Areas

For the purposes of this survey, the state was divided into four general geographical areas, as illustrated in Figure 1. Similarly, the coastal profile was divided into five zones, as illustrated in Figure 2. These divisions were designed for ease of comprehension and compatibility with other classificatory systems in common use. The overall approach was a shift from the general to the more specific. Once the respondent had specified a geographical area, he was asked to identify the zone within that area, one or more important features in that zone, a reasonably exact time frame for proposed operations, and then a detailed description of those operations.

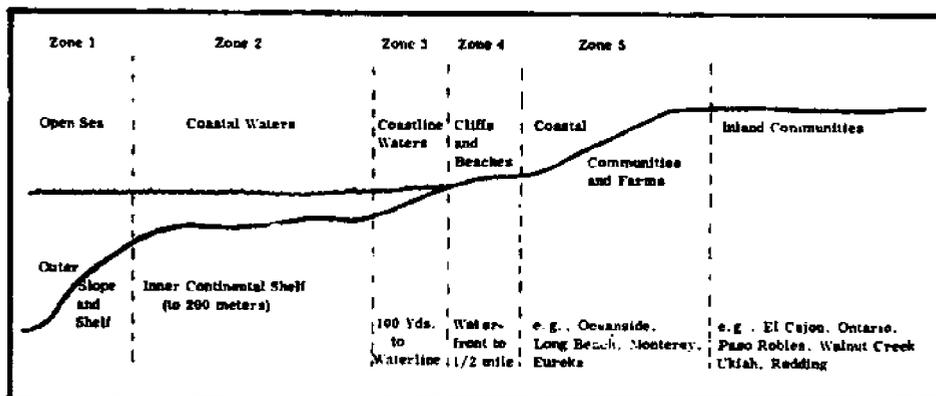


Figure 2  
Profile of Coastal Features

C. Cooperating Industries

The majority of the firms surveyed and interviewed were selected from Dunn and Bradstreet's Million Dollar Directory. Additional firms were selected from publications of a more specialized nature, such as Port of San Francisco, Ocean Shipping Handbook.

Discussions were also held with leading financial institutions in the hope of gaining understanding of the way in which these firms viewed the investment and support problems associated with possible future coastal development. And within the time available, discussions were held with local, county, and state planning agencies, both to become familiar with problem areas currently being encountered by these agencies and to gain a perspective of the current public agency planning functions. Ideally, the information gathered from these institutions and agencies will provide the financial, legal, and social framework within which the survey and interview data can be integrated and placed in perspective.



## SECTION II

### DATA SUMMARY

#### A. Survey Results

This section contains a summary of questionnaire responses and the comments obtained in the follow-up interviews. Survey data is presented first regarding the distribution of planned activity along California's coastline and second regarding distribution of uses across the coastal profile.

These findings are followed by amplifying tabulations reflecting the time-frame of planned activity, activity size or scope, and anticipated funding sources. Results regarding problems and possible governmental and academic assistance are then displayed, followed by a compilation of responses regarding the multiple use concept. The section concludes with a brief summary of interview comments.

Most of the information obtained from the questionnaire is displayed in terms relative to the total number of firms with growth or development plans for activity along the coastline. There were 146 firms who responded in this manner. This base number may be appreciated in its proper perspective only if it is kept in mind that:

- o 1647 questionnaire were mailed
- o 312 organizations responded to the questionnaire
- o 146 of the 312 who responded, indicated that they anticipated engaging in, or supporting coastal growth or development activities.

When reference is made to the number of activities or uses planned, it should be recognized that the base number of 146 has increased as a function of the number of firms who indicated they planned activities in more than one area or required the use of more than one zone or feature.

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The authors wish to express appreciation for the efforts of Donald Wilson, Richard Olsen and Chris Riker related to the conduct and interpretations of follow-up interviews and final compilation of this report.

Table 1 shows the number of firms whose planned activity will involve the use of a given area as a percentage of the total number of firms planning future activity in the state. For example, of the 146 firms who anticipate future activity in the state as a whole, 121 of these firms, or 84%, anticipate activity involving the use of Area IV.

Table 1 - Distribution of Planned Area Use by Firm

	Number of firms planned	Percent of total firms
Area I	22	15
Area II	55	38
Area III	58	40
Area IV	121	84
	n = 146	

Table 2 shows the number of anticipated uses of a given area as a percentage of the planned uses of all areas in the state. For example, 47% of all the planned activity in the state is anticipated to occur in Area IV; or, of the 256 total anticipated uses of the four areas combined, 121 of these or 47% are planned to occur in Area IV.

Table 2 - Distribution of Planned Use by Area

	Number of firms planned	Percent of total area uses
Area I	22	9
Area II	55	21
Area III	58	23
Area IV	121	47
	n = 256 (multiple response)	100%

Comparison of Table 1 and 2 shows that for Area IV, 84% of the responding firms said they planned activity in Area IV, however the 84% represents only 47% of the new growth or development along the coast.

Table 3 shows the number of firms whose planned activity will involve the use of a given zone as a percentage of the total number of firms planning future activity on the coast. For example, of the 146 firms who anticipate future activity on the coast as a whole, 116 of these firms, or 80%, anticipate activity involving the use of Zone 5.

Table 3 - Distribution of Planned Zone Use by Firm

	Number of firms planning use	Percent of total firms
Zone I	23	16
Zone II	40	27
Zone III	54	37
Zone IV	87	60
Zone V	116	80
	n = 146	

Table 4 shows the number of anticipated uses of a given zone as a percentage of the planned uses of all zones. For example, 36% of all the planned activity in the state is anticipated to occur in Zone 5; or, of the 320 total anticipated uses of the five zones combined, 116 of these uses, or 36%, anticipated the use of Zone 5.

Table 4 - Distribution of Planned Use by Zone

	Number of uses planned	Percent of total zone uses
Zone I	23	7
Zone II	40	13
Zone III	54	17
Zone IV	87	27
Zone V	116	36
	n = 320 (multiple response)	100%

Table 5 shows the number of anticipated uses of a given feature in a given zone as a percentage of the total number of anticipated uses of all the features of that zone. For example, of the total number of anticipated uses of the six features of Zone 3 (132), 36 of these, or 27%, will involve use of harbor facilities.

Table 5 - Feature Use

Zone I n = 60	Number of feature uses	Percent of total feature uses	Zone IV n = 306	Number of feature uses	Percent of total featur- uses
Surface	11	18	Harbor access	31	10
Sub-surface	9	15	Beach access	27	9
Ocean floor	11	18	Ocean access	30	10
Living resource	7	12	Delta access	9	3
Mineral resource	9	15	Residential	44	14
Man-made structure	9	15	Recreational	36	12
Other	4	7	Industrial park	36	12
Zone II n = 107			Undeveloped land	23	8
Surface	21	20	Air transport	18	6
Sub-surface	17	16	Land transport	20	7
Ocean floor	23	22	Sea transport	21	7
Living resource	9	8	Other	11	4
Mineral resource	20	19			
Man-made structure	14	13	Zone V n = 279		
Other	3	3	Residential	52	19
Zone III n = 132			Recreational	30	11
Harbor	36	27	Industrial park	60	21
Marina	24	18	Undeveloped land	49	18
Piers	27	21	Air transport	25	9
Breakwater	19	14	Land transport	30	11
Unaltered coastline	16	12	Sea transport	17	6
Other	10	8	Other	16	6

Table 6 shows the distribution of time frames or planning horizons among the various firms anticipating future activity. For example, of the 146 firms planning activity, 70, or 48%, plan to initiate their activity within the next two years.

Table 6 - Time Frame

	Number	Percent
0 - 2 years	70	48
2 - 5 years	61	42
5 - 10 years	34	23
Other	6	4

Table 7 shows the distribution of the size of the planned activities along the four dimensions of manpower, land, plant, and waterfront. For example, 33, or 23% of the 146 firms planning activity, anticipate the need for between 100 and 500 men.

Table 7 - Activity Size

MANPOWER			PLANT SIZE (sq. ft.)		
	No.	%		No.	%
10-30	28	19	5,000-10,000	18	12
30-100	40	27	10,000-50,000	21	14
100-500	33	23	50,000-100,000	20	14
Over 500	25	17	Over 100,000	30	21
No response	20	14	No response	57	39

LAND in acres			WATERFRONT in linear feet		
1-5	24	16	0-100	26	18
5-20	32	22	100-300	10	7
20-100	31	21	300-1500	13	9
Over 100	32	22	Over 1500	13	9
No response	27	19	No response	84	57

Table 8 shows how this activity will be funded. For example, of the 146 firms planning activity, 109 or 75% anticipate using only internal funds.

Table 8 - Source of Funds

Type of Funding	Number	Percent
Internal Only	109	75
Joint Venture	49	34
Local Government	11	8
State Government	9	6
Federal Government	17	12
Other	24	16

Having determined location, size, time frame and funding distributions of the anticipated future activity, it remains to examine some anticipated problem areas relating to this activity, and then examine some of the various possible types of assistance required by the several firms in attempting to solve these problems.

Table 9 shows the different types of problem areas the responding firms anticipated encountering, as well as the relative emphasis placed on these problem areas. For example, under the category of Socio-Legal problems, 67 of the firms, or 46%, felt that zoning would constitute a major problem in the future.

Table 9 - Problem Areas Anticipated

Type of Problem	No.	%	Type of Problem	No.	%
<b>LAND</b>			<b>FINANCE</b>		
Industrial Sites	33	23	Industrial funding	22	15
Residential	30	21	Government funding	19	13
Recreational	18	12	Internal funding	34	23
Commercial	24	16	Risk coverage	16	11
Agricultural	8	6	<b>SOCIO-LEGAL</b>		
<b>MANPOWER</b>			Current public law	21	14
Professional	20	14	Government policies	41	28
Skilled labor	28	19	Zoning	67	46
Trainable labor	8	6	Law enforcement	6	4
Unskilled labor	2	1	Conservationists	62	43
			Public opinion	34	23

After identifying anticipated problem areas, the firms were requested to specify those areas of possible government assistance which would most facilitate the solution of these problems.

Table 10 shows the various forms of possible government assistance desired, and the relative emphasis placed on these forms by the responding firms. For example, 82 of the firms, or 56% expressed the need for assistance from government at the local level in solving problems of land access and zoning.

Table 10 - Government Assistance Desired

Type	Local		State		Federal	
	No.	%	No.	%	No.	%
Land access & zoning	82	56	40	27	20	14
Manpower & training	11	8	17	12	17	12
Funding	14	10	15	10	32	22
Risk sharing	9	6	8	6	12	8
Research & development	19	13	26	18	31	21
New legislation	26	18	42	29	36	25
New executive policy	13	9	17	12	21	14
Law enforcement	20	14	12	8	6	4
Public information	34	23	31	21	31	21
Other	1	1	0	0	0	0

Table 11 shows the various forms of possible academic assistance desired, and the relative emphasis placed on them. For example, 56 of the firms, or 38% expressed the need for scientific and economic research on the part of academic institutions for help in solving their problems.

Table 11 - Academic Assistance Desired

Type	Number	Percent
Management Professional Services	35	24
Scientific/Economic Research	56	38
Special Personnel Training	32	22
Advisory/Consulting	39	27
Other	4	3

Table 12 shows the responses to the question: "Are you agreeable to the concept of 'multiple use planning' in relationship to your proposed location?" 66% of the firms were agreeable to the concept of multiple use.

Table 12 - Multiple Use

	Number	Percent
Yes	97	66
No	20	14
No response	29	20

B. Summary of Follow-up Interviews

The material contained in this section has been selected from the follow-up interviews and organized into three areas:

- o Government Assistance
- o Academic Assistance
- o Multiple Use

Quoted statements have been categorized into one of three types: 1) statements of personal opinion, subjective and not necessarily representative of official corporate policy; 2) statements of corporate policy, objective and representative of official intentions and activities; 3) examples employed by the respondents to illustrate or amplify either personal or official attitudes.

The purpose here is to use interview material selectively as amplification of the data results compiled from the questionnaire responses and to provide some concrete examples of respondent ideas as obtained from face-to-face interviews.

The primary focus of the interviews was an attempt to gain amplifying information in the areas indicated above. It was our intent to provide to the user of this report examples of the types of assistance desired by organizations responding to

the questionnaire. For example, if it was indicated that "Public Information" was a category in which government assistance should be provided at the State and Federal levels, we would pursue the subject, attempting to define the type of information desired, and the media or resources that in the opinion of the interviewee were considered critical. In the case of Academic Assistance, we attempted to identify specific examples and applications which would meet the needs of the organization. Discussions focused on the concept of "multiple-use planning" were directed toward further definition of the term. "Multiple-use" seems to be a popular buzz word in today's planning environment. Insofar as some 66% of our population indicated they were agreeable to the concept, we were interested in providing to the user of this report an indication of what individuals were thinking.

NOTE:

The material herein has been carefully edited to identify verbatim quotations as distinct from recall by the interviewer of context, inference, and specific questions put to the respondent. Quotation marks enclose all verbatim material; the remaining phraseology has been taken directly from actual working notes made by the interviewer in the presence of the respondent, supplemented by recall; in most instances these pages were written up within one hour of the actual conversation.

1. Summary of Interview Comments and Opinion Regarding the Role of Government Assistance to Industry

Land Access and Zoning

The results from the questionnaire show that governmental assistance is desired in the area of land access and zoning. The interviews revealed that two problems are largely responsible for this need for assistance. First, many of the businessmen interviewed indicate that zoning ordinances are outdated. They feel that the ordinances should be brought up to date with current thinking in urban and regional planning to permit more effective use of the land. Second, because a single piece of property may come under the control of several nested legal jurisdictions, the requirements of the various zoning ordinances and building codes make compliance difficult and complex. Businessmen think that these requirements should be coordinated. In addition, businessmen would like more consistency in zoning. Some of those interviewed revealed that arduously prepared master plans have been ignored in matters relating to zoning. There is a need to be able to plan several years in advance and to know that zoning will not change in that time. The mood of the respondents was in favor of revision in the zoning ordinances and land-use planning.

"There are so many different kinds of codes and agencies to handle in a deal that a major part of our research work is to just identify them".

The ideal way to access zoning information would be "some sort of central data bank"; before a client can consider tax structure, pricing, utilities, etc. we have to ask somebody - "well go to one town and find that for such and such type of project, the zone which allows it is C-1; in the next town will be CPD. And on and on".

"The biggest thing the government or academics could do for us would be to develop clear cut guide lines: standards and specifications and regulations for industrial operations".

"In public opinion - the trouble comes when the people aren't properly informed; or a leak of some kind (about what's going to happen in an area) will get them into a pre-conception and they they block up and they can't change - usually this kind of thing happens when you're after a zoning change, or a change of someone's master plan". The government agencies really could be of great assistance to everybody involved: say the local city's master plan is done and our planning must be compatible with it; "the big problem is that a government agency can take action, by condemning or whatever suits the situation, on that land (and do so independently) and not respond to the planning requirements the private sector has to follow. You see, the government project may be a different use than the land is zoned for (under the master plan) and the local agency doesn't keep pace and allow for changes in the situation (created by the government project) and keep up to date and stay compatible with the modified situation which is not reflected in the (original) master plan. The changes in what's appropriate development in adjacent properties should be reflected in master plan modifications.

#### New Legislation and Executive Policy

Most respondents advancing ideas about legislation and policy related those ideas to the zoning problem as summarized above. There was also marked agreement that the legal authority with jurisdiction over a specified parcel of land resides in local agencies. Thus governmental action of any kind which would help to simplify the current problem of information gathering would be viewed as desirable.

One effect of the problem presented by fractionated jurisdiction could be alleviated by inter-level coordination. When one level of government controls a parcel of land, and proceeds with uses not in line with restrictions as maintained by a different level of government on adjacent parcels, the effect is to increase the complexity of the private owner's problem.

Another line of action discussed would involve some sort of actual control of coastal resource management at some level of government higher than municipal. One expression of this idea was frequently mentioned in particular. This was the need for a central collection and dissemination point for all kinds of information - current ordinances, scientific research, and economic factors - pertinent to the basic decision of what to do with coastal resources.

An interesting variation on this theme pointed out the responsibilities and problems faced by governmental agencies themselves in implementing current legislation and policy, for example the Environmental Control Act of 1969.

Thus, perceived problems regarding zoning and land access may be viewed as a surface phenomenon, and problems of governmental structure and policy are visible beneath that surface.

"As much as I dislike the idea, the answer for the coastal zone may require some sort of super-agency with oversight across all facets of the social factors, and over fairly large geographical areas."

"The way we would like government to operate is through coalitions of the local and county (agencies and commissions and districts) who have power now; the resource should be managed as a resource, rather than broken up into jurisdictions".

"The first problem (in deciding what to do along the coastline) is to establish priorities of use regarding particular areas and situations. For example, Camp Pendleton, which may not be needed so much by the military, could be (acquired by local jurisdictions) for public uses. But what if governmental agencies would invoke (eminent domain or whatever) and start acquiring the Malibu coastline - wouldn't a hue and cry go up? So, have priorities set up for each area and situation would give us a basis for "finding how and where to start: such methods as acquisition, easements into perpetuity" and many other approaches.

"The San Francisco Bay BCDC is an example of how the government can operate to protect a resource". Once the public realized that the "bay's existence really was threatened" they strongly supported a regional-agency approach to "protect the resource".

"Assistance in government policy is just this kind of thing. These (agencies and levels of government) should be responsive to the local jurisdictions. For example, even there in the San Francisco Bay the government can put in a shipyard right on the bay, and that's not the cleanest kind of thing, but a private industry can't touch it".

"I emphasized the need for better coordination between levels of government about legislation, policy and law enforcement because that's where many problems now are ... the real key to these is the local level".

"I don't think the various governmental levels are geared to interpret the effects the 1969 act; they're just beginning to realize some of the dimensions of their responsibilities regarding the effects of it. Some kind of interpretation process is needed or the whole thing will just down into an enormous backlog of unfinished projects requiring environmental reports. Coordination between the agencies is needed to do that.

#### Public Information

More complete information, and easier access to it for everyone (including government agencies) are desired by almost all of the respondents interviewed. Several stated the idea that more

complete information available to the general public would make possible more effective decisions regarding resource management. As mentioned in previous sections, one advantage cited for more centralized governmental authority is the pulling together of information about policy, ordinances, environmental impact of various uses, and the ramifications for business of current and projected uses of coastal resources.

The public should be given good, valid, information on scientific breakthroughs - "for example they should find out that a nuclear power plant belongs on the coast line".

"You take the trade associations and union associations and professional groups, they all have a wealth of information on all topics (problem areas); the government could feed these groups "more and better information".

## 2. Summary of Interview Comment and Opinion Regarding the Role of Academic Assistance to Industry

Respondents ideas regarding academic assistance with their anticipated problems varied with type of business and size of the firm. One consulting firm would probably continue its demands on the university community for scientific advice in several specialities of the marine sciences; another spokesman foresaw a need for academic assistance for problems requiring especially fast response and for which there was little or no precedent in the experience of the management of the firm, such as the assessment of the impact on the social environment of projected plans.

The largest companies felt more of a need for the expertise required to re-direct their goals and operations, and while they too would use some assistance in consulting, were also inclined to look to the influx of new academic graduates for at least some of the skills and training background needed to implement new direction.

On one idea, there seemed to be a consensus; the academic community could provide a meeting ground for the development of objective factual information on many of the issues and problems associated with anticipated activity along the coastline. This role was characterized as one of liaison between private or public interest groups and governmental agencies, as the repository and production center for factual data useful to all parties and "sides", and as a source of speakers who can maintain a continuity in special knowledge. It appears that this type of role for academic assistance would bridge the several categories used on the questionnaire in this survey. Such a role would include forum, information, and expertise pertinent to all, or to most, of the problems anticipated by respondents.

"Our needs for expertise will be for an occasional marine biologist or zoologist or ichthyologist or oceanographer, the more esoteric specialities in scientific research" related to uses of the coastal areas.

"The university community produces tomorrow's managers. "Oil already looks to universities for expanding the technology. They (the universities) must have departments of ecological and environmental control and soon so that those managers will have a more accurate way of looking at things".

"Daily practices are being challenged; they're no longer good or reasonable. We have the problem of re-educating older people; then with dealing with those who are running operations; then in dealing with the public, and with the shareholder. It's a whole broad requirement for communication and education to implement policy, once that has been established".

"What we anticipate in this area is more of the humanities in business administration -- to pull away from the straight profit motive and learn how to squeeze out a profit and best serve the whole community, the whole country. The universities will have to change their preparation because business now faces these problems".

"In our work the most valuable function the university plays is to provide continuity in special talent and knowledge -- in all the technical areas".

"Consulting firms tend to be anti-intellectual. A smaller firm will grow around an individual or group of experts accompanied by new, young green ones, but few in-betweeners. The idea is that the young guy works with the expert for 20 years or so and this experience is his training; but now, as we've been noting, the new problems are such that we don't have the experience -- nobody does. So the academics may have a role after all".

"We don't know what benefits we can derive from the ocean. Universities could assist us with feasibility studies for land and ocean use. There should be a master plan for the use of this land".

### 3. Summary of Interview Comment and Opinion Regarding the Term "Multiple-Use"

Most questionnaire responses showed agreement with the concept of "multiple-use" of coastal resources. Therefore this question was a convenient starting point in the interviewing, and while there was some variation on the theme, depending on the kind of business represented, interview responses in amplification of the simple questionnaire response were strikingly similar. They are most succinctly stated by one respondent; "To almost any businessman it (the idea of multiple-use) means to realize an ultimate income from as many uses as possible".

A majority of the people interviewed also mentioned recreational uses such as marinas, and the validity of the need for access to beaches by the public.

One respondent with a different opinion put forth a more comprehensive view of the concept, including scientific and research opportunities unique to the coastal area, and the different kinds of public interest. These latter included those of the coastal resident, the inner-city, weekend escapee, as well as the businessman who views the coast from the point of view of financial investment. Finally, he also spelled out the concept in terms of the multiplicity of kinds of resources to be used.

"I think the Port of Los Angeles is a very good example of our concept of multiple-use. In that area you have residential (development of all types), commercial, industrial uses of the coastal zone. The potential of the area for recreational uses has only been barely touched ... and its use for scientific purposes apparently hasn't occurred to (most of the agencies with some measure of authority or control) people at all".

"We see multiple-use as an obvious meaning; industrial, commercial, residential; all the varying usages of the land -- the normal spectrum of land usage".

"Take our (specified project), several parcels would be set aside..." for shops and public facilities of several kinds; "I don't happen to go along with this"; in another development up on the coast where there are plans, both residences and apartments could be put in ...." even a market might be included, this is all very definitely a matter of multiple-use".

"We have this concept in mind when we say multiple-use: we plan to use our site for more than this (the primary) purpose -- some other industrial uses" of the by-products generated as part of the primary use.

## SECTION III

### DISCUSSION

As an adjunct of the Sea Grant Program, this survey was developed in an attempt to characterize the role of business and industrial interests in the general decision making process regarding the use of California's coastal resources. The results of the survey suggest that industry and business (with the possible exception of utilities) plan and operate to maximize profit in the short run. Table 6 shows that approximately one half of the firms plan to initiate activity within the next two years. This indication of immediacy, though possibly inflated to a small degree by multiple responses on the part of some firms and unspecified responses on the part of others, does imply that the activity surveyed is in relatively definite stages of planning at the present. This tends to lend validity to the other bodies of data in the report, since activities scheduled for two years in the future must almost necessarily be planned specifically and in detail, not merely contemplated.

The survey results also suggest that the use of the land in fairly conventional development schemes will be the primary approach to coastal resource use by business and industry. Table 2 shows that of all the activity anticipated by the respondents, almost half is to occur in Area IV -- Southern California from a point just south of Santa Barbara to the Mexican border. Table 1 shows that more than 80% of the firms responding plan to initiate activity in this area. This is twice as much activity and twice as many firms as any other area.

Tables 3 and 4 indicate that the majority of the firms plan the majority of their future activity in Zones 4 and 5. To summarize the use distributions, then, the survey indicates that over 3/4 of the firms plan to initiate half their anticipated activities during the next ten years on land adjacent to the Southern California coast. The present size and growth rate of this area reinforces the trends indicated by the survey. But the results also suggest a relatively insignificant amount of activity planned for the beach and offshore zones of the coast. In the broadest possible terms, it seems to be the value which the ocean imparts to the land, rather than the ocean per se, which will attract industry to the coast in the next decade.

The trends regarding feature use are not as clear as those dealing with area and zone uses. But in general, Table 5 tends to reflect the concentration on land as opposed to water. Future activity will be centered most heavily on land for residential, recreational, and industrial uses.

This result is not unexpected when it is remembered that almost half of the responding firms were engaged in land development or financial support for land development.

#### Cross Section of Survey Respondents

Real Estate, Land Development, Finance .....	46%
Utilities, Natural Resource, Energy .....	12%
Research & Development, Engineering, Consulting .....	3%
Aerospace, Transportation .....	3%
Industrial Manufacturing, Food Manufacturing .....	26%
Wholesale & Retail Sales .....	8%
Other .....	2%

Possibly the most definitive trend arising from the survey data concerns funding. 3/4 of the firms indicated that their future activity would be financed through internal funds -- internally generated funds and bank loans. Very few of the firms expected funds for their coastal activities from the various levels of government. This implies that the primary emphasis of these activities will be practical and profit oriented, rather than research and development oriented.

As it was felt that the financial environment would have a significant impact on future coastal activities, interviews were conducted with representatives of California's commercial banking industry to elicit their perspectives on the future development of the coastal resources with regard to the following general areas:

1. The concept of the general acceptability of proposals for the development of ocean resources through bank financing.
2. The concept of the acceptability of land development in the coastal areas of the state.
3. The receptivity of the banking industry to considerations other than profitability in the evaluation of ventures, i.e. the opinions expressed by conservationists and environmentalist groups concerning a given venture.

The substance of the bank's responses was that every request for financial support for proposed projects would be evaluated on an individual basis, taking into consideration the characteristics of the proposal and the prior experience of the loan officer involved. There exists no set policy or body of formalized guidelines. However, although minimizing risk was a major concern, the banks did incorporate issues reflecting public welfare into their decision making process. On the whole, the bankers felt that although the bank's evaluation of a given proposal might not employ the same parameters as might be used by environmentalists, for instance, both groups would in all probability arrive at similar conclusions. In support of this contention, the example of land development along the coast north of San Francisco was cited. The banks involved chose not to finance speculative land development in this area, especially where the repeated sale of parcels of land would force property taxes up as prices and assessments of the land rose. The proposal was viewed as contributing to an upward spiral in prices which would eventually necessitate the subdivision of the land as the only means to alleviate excessive property taxes.

With regard to purely oceanic ventures, such as aquaculture or deep sea mineral extraction, as opposed to coastal land development, the banks held more reserved opinions, summarized as follows:

1. Such activities in the ocean represented higher risks than the banks customarily were willing to accept.
2. Profitability and risk aside, the banks were unwilling to finance activities, even when proposed by their prime customers, that appeared to have adverse effects on the environment, general public use, or traditional commercial use (i.e. the dungeness crab fishery outside San Francisco Bay).
3. Any support from governmental agencies, such as risk sharing, would improve the bank's willingness to finance such projects, but perhaps only in terms of financial considerations, leaving prior considerations of public interest still unanswered.

Believing that increased public information concerning the use and development of coastal resources would benefit the consumer in general and the environmentalists in particular, the banks saw the most effective form of governmental assistance to be the dissemination of balanced and objective evaluations of coastal activities. The banks felt that the various companies presently engaged in coastal development, representing as they do certain vested interests, have developed an extensive amount of essentially one-sided promotional information, which could and should be balanced by governmental information.

A few ways in which these trends become sources of problems and controversy are also suggested by the survey results. Many of the firms who are planning activity along the coast anticipate problems with socio-legal issues as shown in Table 9. In addition, the businessman's concept of "multiple-use" is oriented toward his own goals of short run profit maximization, in contrast to the more global evaluation of long-range, total-resource management that might be expected of researchers in the natural sciences.

Spokesmen for business and industry who participated in the survey mentioned a variety of ideas regarding how best to respond to these problems. The results presented in Tables 10 and 11 suggest that respondents are aware that their immediate problems in land access and zoning require governmental assistance, and that a part of this assistance must include legislation and executive policy changes.

The summaries of comments obtained in personal interviews suggest an active interest in developing ways and means for the establishment of a better-defined forum for resolving the controversies. These comments also indicate an active desire for more depth and objectivity in the information made available to business, the public, and to the several levels of government.

A realization of these interests would seem to provide a more balanced approach to the making of decisions regarding the use of coastal resources, and to make the decision making process itself more visible.

The representatives of organizations which have an economic stake in the use of coastal resources appear to be well organized and staffed with professionals for the purpose of coping with the welter of bureaus and commissions which control resource use. There does not appear to be an exception to the rule that they operate with the goal of dollar profit. For example, an executive in land development comments, "We're a day to day business. We use academic consultants to solve un-anticipated problems fast". Or the executive in a major utility company; "We're used to looking 10 years out". He continues, noting that the problem now is to adapt his established analytical expertise in developing plans for change to his own operation as a response to the impact of environmental considerations.

By contrast, in the forum for negotiation, (some several thousands of governmental agencies) representatives of "public opinion" appear to be mainly constituted of various kinds of citizen groups which do not have complete information in many instances, but who may press arguments with an effective emotional appeal to the larger public, regarding an issue of momentary import in popular media. One result of this kind of action can be a shortsighted political response.

With one exception, the few industry representatives interviewed agreed that some sort of regional agency approach was desirable. The exceptional interviewee argued that this approach was not feasible because of the threat such an agency would pose for the local authority which is the status quo; that while such an agency might be established on paper, the intent of it would be frustrated by less than precise information inputs from the local agencies; that a more promising alternative would be a development of coalitions of these local agencies, at least as a starting point.

Underlying the contrast in efficacy noted above, the interviews also seemed to suggest that public and private interest is not necessarily compatible. Rather, there was an indication that the various companies interviewed are all taking actions, which they perceive as feasible, to adapt themselves so as to follow the "public interest". These adaptations appear to fall into two groupings. One way of meeting the impact of the environmental issue is to change the product line of the firm. For example, two petroleum exploration and refining companies and one consulting engineering firm have already entered the land development field as a corporate enterprise. In the other major adaptation to the problem, the corporate pattern of response is to alter the management philosophy, policies, and procedures in order to take into account the changing environment. This recognizes that the profit motive may become conditional upon other factors. For example, the executive (also referenced above) in a major utility stressed the depth, within the firm, to which these kinds of changes would have definite impact. The spokesman for a large consulting engineering firm stressed in high rate of the changes required as well as their impact on policy; "... all of a sudden you have to re-assess everything that's happening".

The largest firms seemed to tend towards the second kind of adaptation; secondary and smaller companies may not have the resources required for a major re-direction, except in terms of product line. For those more independent and yet-smaller firms, operating on closer margins, the impact may be fatal; as one respondent puts it. "... the smaller companies will be squeezed out by it" (in reference to the competitive aspects of making such an adaptation).

## SECTION IV

### RECOGNIZED FUTURE NEEDS

Information obtained thru the use of both questionnaire and interview techniques points out the fact that effective planning for future coastal utilization will also require indepth information concerning development trends under the direct control of Federal, State and Local Agencies. It was also indicated that many times authorative information was difficult to obtain and frequently basic guidance was in conflict.

Considering the scope of planning functions in todays environment many problem areas require considerable in-depth technical knowledge as well as research into biological, physical, environmental, and social science areas. Activities and services in these areas have become more costly, intricate, and increasingly intertwined with political ramifications at all levels of government.

Within this framework it is extremely difficult to comprehend the complete scope of activities in any one environment, and most certainly the relationship between environments. This has frequently resulted in decisions being guided by intuition on crises rather than logical planning processes.

Three basic activities which are critical to the overall success of future California as well as National plans related to coastal development are:

- o Acquisition of in-depth information concerning present plans for the future use of the land or water along the coast which is under the direct control of Federal, State, or Local Governmental Agencies.
- o Performance of a user oriented requirements analysis related to the stated need for a centralized public information system.
- o Research and Development of techniques which will provide the tools required by management and planners involved in making decisions dealing with large scale physical and social problems requiring in-depth multidiscipline technical knowledge.

## APPENDIX A

### Industry Survey Vehicle

The primary vehicle for obtaining data in the Industry Survey was a questionnaire mailed to a population of selected representatives of business in California. This appendix is comprised of samples of the questionnaire, its answer sheet, and its accompanying cover letter.



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**INDUSTRY AND THE CALIFORNIA COAST**  
**A SURVEY QUESTIONNAIRE**

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Conducted by

Research Institute for Business and Economics  
University of Southern California  
Graduate School of Business Administration

A

NATIONAL SEA GRANT PROGRAM\*

**OBJECTIVE:**

The prime objective of this Industry Survey is to determine if any recognizable trend can be established regarding utilization of the Ocean or Land along the California Coast during the next ten years.

Information is being gathered from organizations representing major aspects of the projected coastal community. For example:

Investments and Finance. Banks, Insurance Companies, Investment Houses, etc.  
Industry using the ocean. Shipping, Fishing, Natural Resources, etc.  
Industry using the coastal land. Land Developers, Recreation, Aerospace,  
Utilities, Transportation, Retail Trade, Manufacturing, etc.

\*Description on back cover

The California Coast

We are interested in finding out the general geographical area or areas of the California Coast you intent to use. In Figure 1 below, we have divided the State into four coastal areas. You will be asked to identify your organization's interests in accordance with this figure.

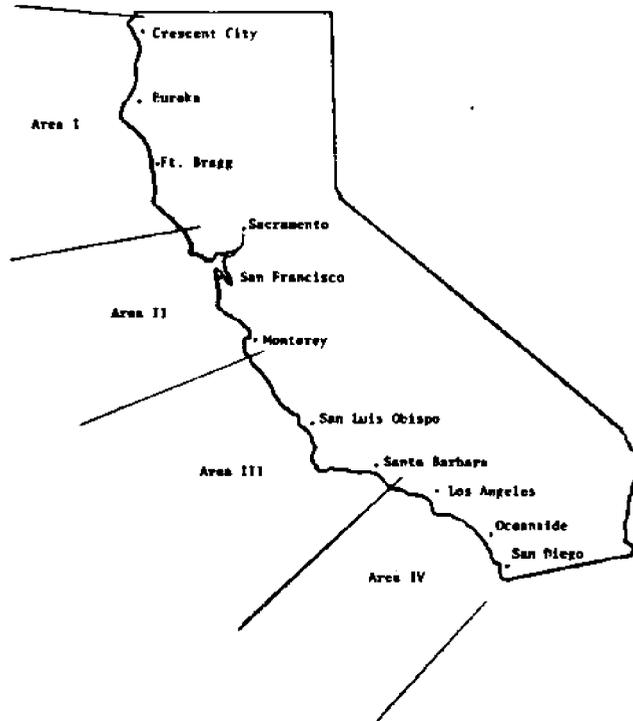


Figure 1  
California Coastal Areas

We are also interested in determining which general features of the coast you need or plan to use. In Figure 2 below, we have presented a generalized profile of coastal features with five zones identified for your attention. You will be asked to relate your organization's needs to these zones.

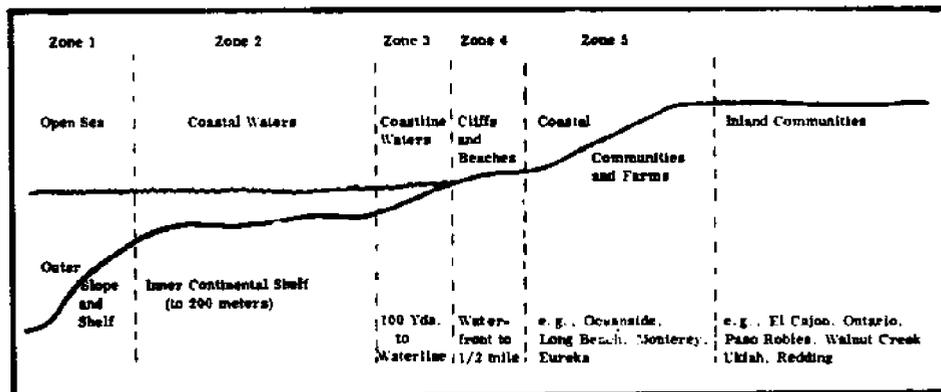


Figure 2  
Profile of Coastal Features

## QUESTIONNAIRE

**PLEASE NOTE:** The intent of this questionnaire is to obtain information regarding the projected growth of your present activities, or your plans for new development. It is not a survey of current activity. We are interested in your projection of future growth and/or new development.

1. Please describe your firm's major line of business or product area. (i. e. , Banking: commercial loans. Petroleum: processing, exploration. Land Development: residential, industrial. Sales: wholesale, retail. Manufacturing: tools).
2. Do you anticipate your firm being engaged in, or providing support for, activities which would make use of the land or ocean along the California Coast at any time in the next ten years?  
a) Yes                      b) No
3. If your firm does not anticipate any such activity, please indicate why.  
a) No interest              b) Other (comment)
4. Please select from Fig. 1 (facing page), the area or areas where you are most likely to engage in the projected activities.  
a) Area I                      c) Area III  
b) Area II                     d) Area IV
5. Please select from Fig. 2 (facing page), the zones or zones you are likely to use.  
a) Zone 1                      c) Zone 3    e) Zone 5  
b) Zone 2                      d) Zone 4
6. For each zone you have selected in Question 5, please indicate the feature or features you are likely to need or use during the next ten years.  

Zone 1 and 2

a) Surface                      e) Mineral resource  
b) Sub-surface                f) Man-made structure  
c) Ocean floor                g) Other (comment)  
d) Living resource

Zone 3

a) Harbor                      d) Breakwater  
b) Marina                      e) Unaltered coastline  
c) Piers                        f) Other (comment)

Zone 4

a) Harbor access              g) Industrial park  
b) Beach access                h) Undeveloped land  
c) Ocean access                i) Air transport  
d) Delta access                j) Land transport  
e) Residential                 k) Sea transport  
f) Recreational                l) Other (comment)

Zone 5

a) Residential                 e) Air transport  
b) Recreational                f) Land transport  
c) Industrial park              g) Sea transport  
d) Undeveloped land         h) Other (comment)
7. How soon do your plans call for initiating or implementing the proposed activity?  
a) 0 - 2 years                      c) 5 - 10 years  
b) 2 - 5 years
8. Where applicable, provide a gross estimate of your firm's growth in the following:  

Manpower

a) 10 - 30                        c) 100 - 500  
b) 30 - 100                      d) Over 500

Plant size (sq. ft.)

a) 5 - 10,000                      c) 50 - 100,000  
b) 10 - 50,000                    d) Over 100,000

Land (acres)

a) 1 - 5                            c) 20 - 100  
b) 5 - 20                         d) Over 100

Waterfront (linear feet)

a) 0 - 100                        c) 300 - 1500  
b) 100 - 300                      d) Over 1500
9. Please provide an estimate of the source of your growth or development funds.  
a) Internal to organization  
b) Joint venture  
c) Local government  
d) State government  
e) Federal government  
f) Other (comment)

10. Please indicate if any of the following are anticipated problem areas.

**Availability of Land**

- a) Industrial sites
- b) Residential development
- c) Recreational development
- d) Commercial development
- e) Agriculture

**Availability of Manpower**

- a) Professional
- b) Skilled labor
- c) Trainable labor
- d) Unskilled labor

**Availability of Finance**

- a) Industrial funding
- b) Government funding
- c) Internal funding
- d) Risk coverage

**Socio-legal**

- a) Current public law
- b) Current government policies
- c) Zoning
- d) Law enforcement
- e) Conservationist groups
- f) Public opinion and pressure

Other (comment)

11. In what areas can the various levels of government assist in alleviating problems?

	<u>Local</u>	<u>State</u>	<u>Fed.</u>
a) Land access or zoning	___	___	___
b) Manpower or training	___	___	___
c) Funding	___	___	___
d) Risk sharing	___	___	___
e) Research & development	___	___	___
f) New legislation	___	___	___
g) New executive policy	___	___	___
h) Law enforcement	___	___	___
i) Public information	___	___	___
j) Other (comment)	___	___	___

12. Please indicate if you feel academic resources in California could be of assistance to your organization in meeting its projected goals in any of the following areas:

- a) Management or other professional services
- b) Scientific or economic research
- c) Special training for skilled or unskilled personnel
- d) Other (comment)

13. Are you agreeable to the concept of "multiple use planning" in relationship to your proposed location.

- a) Yes
- b) No

**\*NATIONAL SEA GRANT PROGRAM**

On October 15, 1966, President Johnson signed Public Law 89-688, the NATIONAL SEA GRANT COLLEGE AND PROGRAMS ACT. This Act provided for the application of our nation's institutions of higher education to coastal and marine resources development through education, research, and advisory services.

In 1970 the University of Southern California was chosen as California's first Sea Grant Institution. By blending its expertise in marine sciences and engineering with such disciplines as business administration, law, and public administration, the University took as its charter, the development and management of California's coastal and marine resources.



9. Sources of Funds

- a) Internal only
- b) Joint venture
- c) Local government
- d) State
- e) Federal
- f) Other \_\_\_\_\_

10. Anticipated Problem Areas:

- |                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Land</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> a) Industrial</li> <li><input type="checkbox"/> b) Residential</li> <li><input type="checkbox"/> c) Recreational</li> <li><input type="checkbox"/> d) Commercial</li> <li><input type="checkbox"/> e) Agricultural</li> </ul> | <p><b>Manpower</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> a) Professional</li> <li><input type="checkbox"/> b) Skilled labor</li> <li><input type="checkbox"/> c) Trainable labor</li> <li><input type="checkbox"/> d) Unskilled labor</li> </ul> | <p><b>Finance</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> a) Industrial funding</li> <li><input type="checkbox"/> b) Government funding</li> <li><input type="checkbox"/> c) Internal funding</li> <li><input type="checkbox"/> d) Risk coverage</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Socio-legal

- |                                                                                                                                                                                                       |                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> a) Current public law</li> <li><input type="checkbox"/> b) Government policies</li> <li><input type="checkbox"/> c) Zoning</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> d) Law enforcement</li> <li><input type="checkbox"/> e) Conservationists</li> <li><input type="checkbox"/> f) Public opinion</li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Other \_\_\_\_\_

11. Government Assistance

	Local	State	Federal
a) Land access & zoning	_____	_____	_____
b) Manpower & training	_____	_____	_____
c) Funding	_____	_____	_____
d) Risk sharing	_____	_____	_____
e) Research & development	_____	_____	_____
f) New legislation	_____	_____	_____
g) New executive policy	_____	_____	_____
h) Law enforcement	_____	_____	_____
i) Public information	_____	_____	_____
j) Other	_____	_____	_____

Comments \_\_\_\_\_

12. Academic Assistance

- a) Management or professional services
- b) Scientific or economic research
- c) Special training for personnel
- d) Advisory or consulting
- e) Other \_\_\_\_\_

13. Multiple-Use

- a) Yes
- b) No

Please place your mailing address below so that you will receive a copy of the results of the survey.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

RESEARCH INSTITUTE FOR BUSINESS AND ECONOMICS  
UNIVERSITY OF SOUTHERN CALIFORNIA  
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION  
UNIVERSITY PARK  
LOS ANGELES 90007

The University of Southern California has been awarded Sea Grant Institution status under the National Sea Grant College and Program Act (Public Law 89-688).

In support of this program, the Research Institute for Business and Economics is soliciting your assistance in conducting a limited Industry Survey.

We are seeking information from organizations who anticipate being engaged in, or providing financial support for, activities which would make use of the land or ocean along the California Coast during the next ten years. Information is being obtained by the use of the enclosed questionnaire, and may be supplemented by selective personal interviews.

Results of this survey will be used to assist industry as well as Local, State, and Federal Agencies in the process of planning for the most efficient utilization of a prime and limited resource, i.e., The California Coastal Zone.

Every effort has been made to keep this inquiry relevant and as short as possible. In return for your participation in this effort, the University will provide a copy of the final report as soon as available.

The subject is complex, the time constraints are stringent. Your cooperation in this initial effort will be greatly appreciated.

Most sincerely,

Marshall H. Brenner  
Associate Director

MHB/kh

Enc.

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