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15-2 STRUCTURING COMMUNICATIONS PROGRAMS FOR PUBLIC PARTICIPATION IN WATER RESOURCES PLANNING

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A Report Submitted to the:

U.S. ARMY ENGINEER INSTITUTE FOR WATER RESOURCES
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060

under

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A Report Submitted to the
U. S. Army Engineer Institute for
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Kingman Building
Fort Belvoir, Virginia 22060

by

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INTRODUCTION

Most federal agencies with resource planning and management responsibilities have received both executive and legislative directives to promote broad public involvement in their planning studies.

Legislation such as the National Environmental Policy Act of 1969, the Clean Air Amendments of 1970, and the Federal Water Pollution Control Act Amendments of 1972 provides for public disclosure of information, public hearings, and soliciting feedback for management decisions.

Likewise, Executive Order 11514 (1970) issued in furtherance of NEPA directed that agencies "develop procedures to insure the fullest practicable provision of timely public information and understanding of Federal plans and programs with environmental impact to obtain the views of interested parties. These procedures shall include, whenever appropriate, provisions for public hearings, and shall provide the public with relevant information, including information on alternative courses of action."

In response to this legislation, agencies have promulgated policies and guidelines to implement these directives which have fully legitimized the concept of an open planning process which incorporates a program of citizen involvement throughout. Regulations, guidelines, and instructions to promote broad public involvement in planning studies have been issued by the Army Corps of Engineers (1971), the

Federal Highway Administration (1972), the Forest Service , the Environmental Protection Agency (1973), the Water Resources Council (1973) and others.

The net result is that the public's role in the planning and implementation functions of resource management agencies is well established and is indeed a fact of life so far as water resource planning and management is concerned. Indeed, planners must respond to the increasing determination of enlightened citizens to take part in decision-making processes that affect their lives.

Nevertheless, planning for water and related land-use programs and projects has often excluded many citizens and interest groups from meaningful participation, with the possible result being plans which are not fully responsive to the needs and wishes of society. In this regard the Water Resources Council (1973) has stated in connection with the Principle and Standards for Planning that:

> The success of water and related land resources planning depends on meaningful participation of interests concerned with each objective at each step in the planning process. The leaders for water and related land resource planning have the challenging responsibility of achieving such participation while managing effective planning studies and facilitating decision-making. This responsibility will require an aggressive program to involve all concerned interests in identifying an area's problems and needs, in planning alternative solutions, and in decisions as to action.

Recognizing this need for continually improving interaction between planner, decision-makers and concerned public interests in water resources planning studies, this report is directed towards describing

methods and techniques for planner-citizen communication which will enhance the level of public participation in the planning process and will permit citizens and planners to work effectively together in arriving at planning decisions which affect multiple local, state, and federal jurisdictions.

The content of public involvement is the information that flows between the agency planners and the publics. Public planning participation is essentially a communication process. With an eye to the integrated nature of planning and communication processes, a number of important questions relating to the structure and development of public participation programs should be examined.

1. What are the basic communication objectives relative to the planning process?
2. Who are the "publics" that should be involved?
3. What information should be communicated between planner and publics at each stage in the planning process?
4. What communication methods and techniques should be used to achieve the most effective participation and involvement?
5. How should planning information be organized and displayed to solicit the publics' value judgments as to their relative preferences among planning alternatives?

At the outset, it should be stated that the questions have no "right" answer that applies to every situation. Rather, they are questions that need to be answered for each particular planning study in tailoring

a program of public participation. Hence, the aim of this report is to provide a context for approaching these questions in organizing and structuring communication in public involvement programs. The objective sought is to allow decision-makers and planners to better exercise their scientific and professional judgment within the framework of citizens' values during a study in order to achieve a truly open and interactive planning process.

CHAPTER 1

PLANNING PROCESS DYNAMICS AND PUBLIC PARTICIPATION

Dynamics of the Planning Process

Generally, the approach to water resources planning in the past has been product oriented rather than process oriented. The focus of the effort, therefore, was on producing a document prescribing a program for control and development of the water resources of a particular region. The product approach places stress on the gathering and analysis of physical data and the design of engineering works, rather than on the utilization of the planning process itself as a vehicle for arriving at plans as an expression of public interest in the management of water resources.

The process view of planning is conveyed by the following definition (Ortolano 1974):

> Planning may be viewed as a set of activities carried out to generate information that is useful in deciding on future courses of action.

From this definition it may be inferred that three key elements are integrated within the dynamic nature of the planning process:

1. The performance of functional planning activities.
2. The generation of factual and evaluative planning information.
3. Decisions on courses of action through communication.

Improving effectiveness of information and communication within the planning process requires a framework for understanding their nature and requirements within the context of the planning tasks and activities.

The Planning Process and Planning Tasks

In laying out its study procedures for water resources planning, the Corps of Engineers (1975) recognize four basic planning tasks within the planning process: (1) problem identification, (2) formulation of alternatives, (3) impact assessment, and (4) evaluation. The description of these activities and the planning process are consistent with the dynamic planning process conceptualized by Ortolano (1974). In contrast to the linear sequential view of planning, these tasks are proceeding simultaneously at all times during the planning process. However, there will be times when certain tasks will be emphasized or focused on more than others as the process cycles through a number of iterations in moving toward higher degrees of resolution and final decision-making (see Figure 1-1). These iterative cycles are grouped in three major stages associated with the accomplishments and information outputs of planning. As a basis for identifying information and communication requirements relative to this process, a brief description of the planning tasks and major stages as outlined by the Corps of Engineers follows:

> a. Problem identification. The purpose of problem identification is to identify the range of problems the study effort will address and to establish the study area planning objectives.

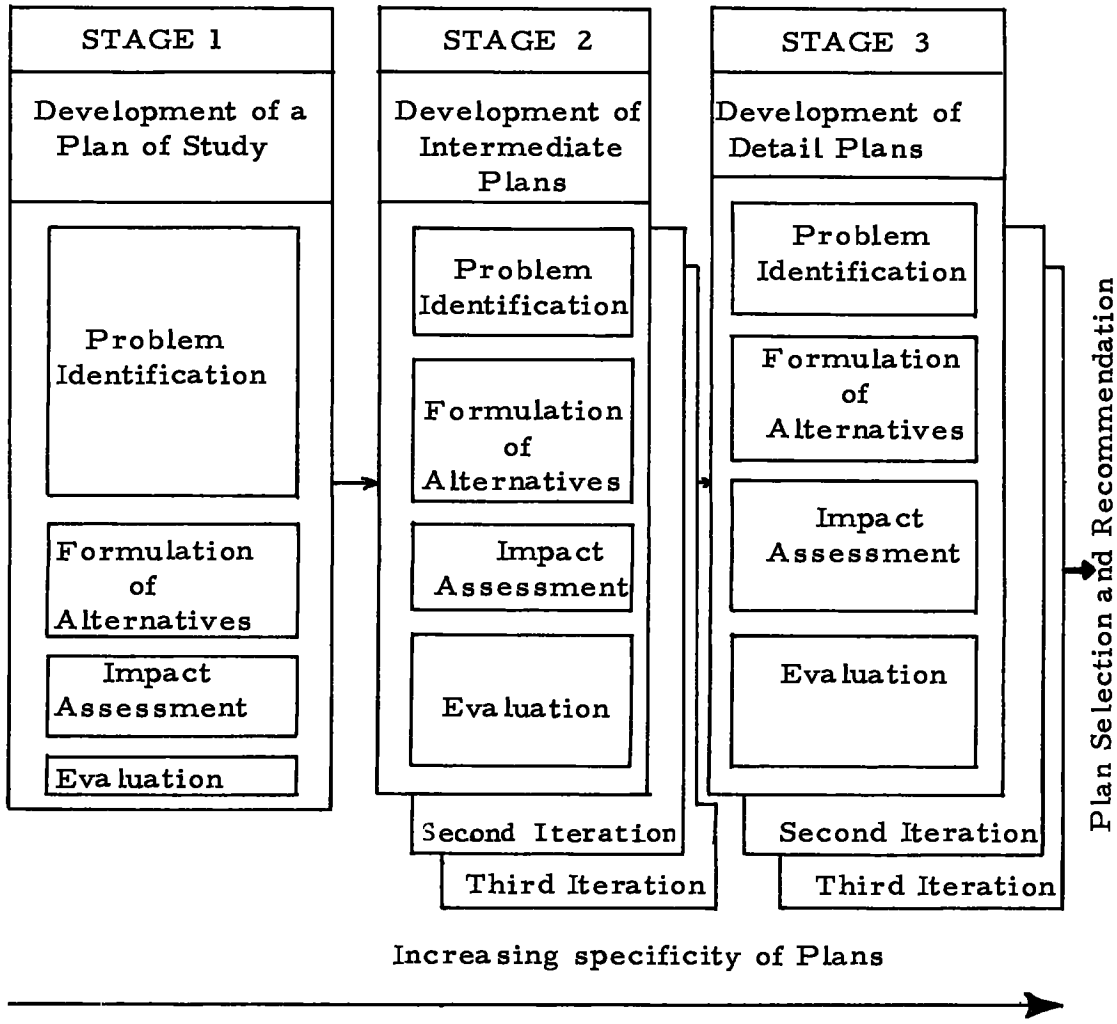


Figure 1-1. Relationship of Planning Stages and Tasks.

The planning objectives provide the direction for formulation of alternative plans and form the basis for assessing and evaluating alternatives. Problem identification involves:

(1) Identify public concerns.
(2) Analyze resource management problems.
(3) Define the study area.
(4) Describe the base condition.
(5) Project future conditions.
(6) Establish study area planning objectives.

b. Formulation of Alternatives. The purpose of formulating alternative plans is to develop and design complete water resource management systems which satisfy the planning objectives. Formulation involves the following activities:

(1) Identify the full range of resource management measures available for problem solution, including measures favored by representative segments of the public.
(2) Identify applicable structural and non-structural management measures.
(3) Develop plans.
(4) Consider plans of others.

c. Impact Assessment. The purpose of impact, or effect, assessment is to identify and measure the changes expected to result from different alternative plans. Impacts are identified by comparing all the components of an alternative plan to the base condition of the region to determine the economic, social, and environmental changes from the conditions that are expected to occur with the plan. Impact assessment involves the following:

(1) Determine the sources of impacts, such as inputs, outputs or facilities.
(2) Identify and trace impacts.
(3) Specify incidence of impacts, including spatial distribution, and when they will occur.
(4) Measure impacts.

d. Evaluation. The purpose of evaluation is to determine how well the alternative water resources plans achieve the planning objectives, and how the plans affect other related problems. Evaluation provides the basis for trading off among the alternatives so that recommended actions can be made. Evaluating alternative plans is contingent upon reflecting publicly-held values to determine which are the beneficial and adverse aspects of each plan. Evaluation involves:

(1) Appraise planning objective fulfillment
(2) Appraise system of accounts fulfillment

(3) Apply specified evaluation criteria.

(4) Perform tradeoff analysis, in part through public involvement.

(5) Designate NED and EQ plans.

These planning activities go through succeeding iterations reflecting an increasing level of effort, detail, and refinement. While the planning process is, of course, continuous the Corps has identified three stages in the process for which study progress and scope can be monitored to facilitate management and orderly development of plans. The particular results and outputs of each stage, as specified by the Corps, identifies, therefore, some of the basic information generation and documentation requirements for a planning study.

a. Stage 1--The Plan of Study. This stage should result in a clear indication of the scope of the study, the precise study area planning objectives it will pursue, specific constraints that have been identified and how subsequent planning activities will be handled.

b. Stage 2--Development of Intermediate Plans. This stage concentrates on a more thorough analysis of the problems, as well as the development of a preliminary range of solutions to the problems. The initial development of alternatives should not be unduly constrained. Plans developed which are contrary to existing public preferences permit a comparison showing the social, environmental, and financial cost of the preferences. A public reassessment of their preferences may result in a changing of those preferences to accommodate new or innovative concepts. It is not inconceivable that many alternatives will be developed in this stage at a very gross level of detail. Those showing promise may be carried forward, while others may be discarded due to adverse public reaction, engineering or other reasons.

c. Stage 3--Development of Detail Plans. This stage concentrates on developing an increasing level of detail on a decreasing number of alternative water resource plans. The reduction in the number of plans under consideration is accomplished, in part, through public involvement.

Information Generation in Planning Activities

Information is essentially the "glue" that sticks tasks and activities together in the planning process. As such, information underlies and permeates the planning process in two important ways: First, each planning activity has associated with it information and data levels that determine the degree of refinement of the task. As examples:

(1) Problem definition. Scope and terms for problem definition, decisions on problems to be studied, and selection of the set(s) of evaluative factors.

(2) Formulation of alternatives. The range of alternatives considered, and the descriptive detail on the characteristics of alternatives.

(3) Impact analysis. Types and range of impacts considered, particularly with reference to higher order impacts, and level of detail in analyzing impacts (How much of what, when, upon whom?).

(4) Evaluation. Criteria to be used in plan selection, methods, and procedures for evaluation (How should criteria be weighted and trade-offs made? Who should do it?)

Second, the flow of information between tasks becomes the basis for reformulating or restructuring the current state of a task in the planning process. For example: the formulation of alternatives may crystalize the implications of certain objectives and thus bring about their restatement, or through generating impact information the

concept of the problem may change, or evaluative information may precipitate a reformulation of alternatives to adjust to important values of a certain affected group.

To further define information content and flow among planning activities, a pictorial representation of information flow in the planning process is shown in Figure 1-2. The figure provides a framework for relating the information content and data with the planning activities and tasks. The flow of information among tasks shows how the process fits together in deriving public interest decisions on activities, programs, and projects.

Viewed from the planner and the publics perspective, the figure suggests that planning process tasks are directed at generating, organizing, and integrating two kinds of information for planning decisions. The public input is generally in the form of value information, the top row of boxes in the flow chart, which consists of expressions of individual and societal wants, needs, and desires related to aspirations for the future, and criteria in evaluating resource management options. Correspondingly, planners input action-impact information, the bottom row, which relates resource availability and capability, alternative actions, and assessment of impacts in order to determine the degree of effects on economic, social, and environmental systems. The interaction of value information and factual information is brought into final focus through evaluation and ranking of the set of alternatives to select a preferred course of action.

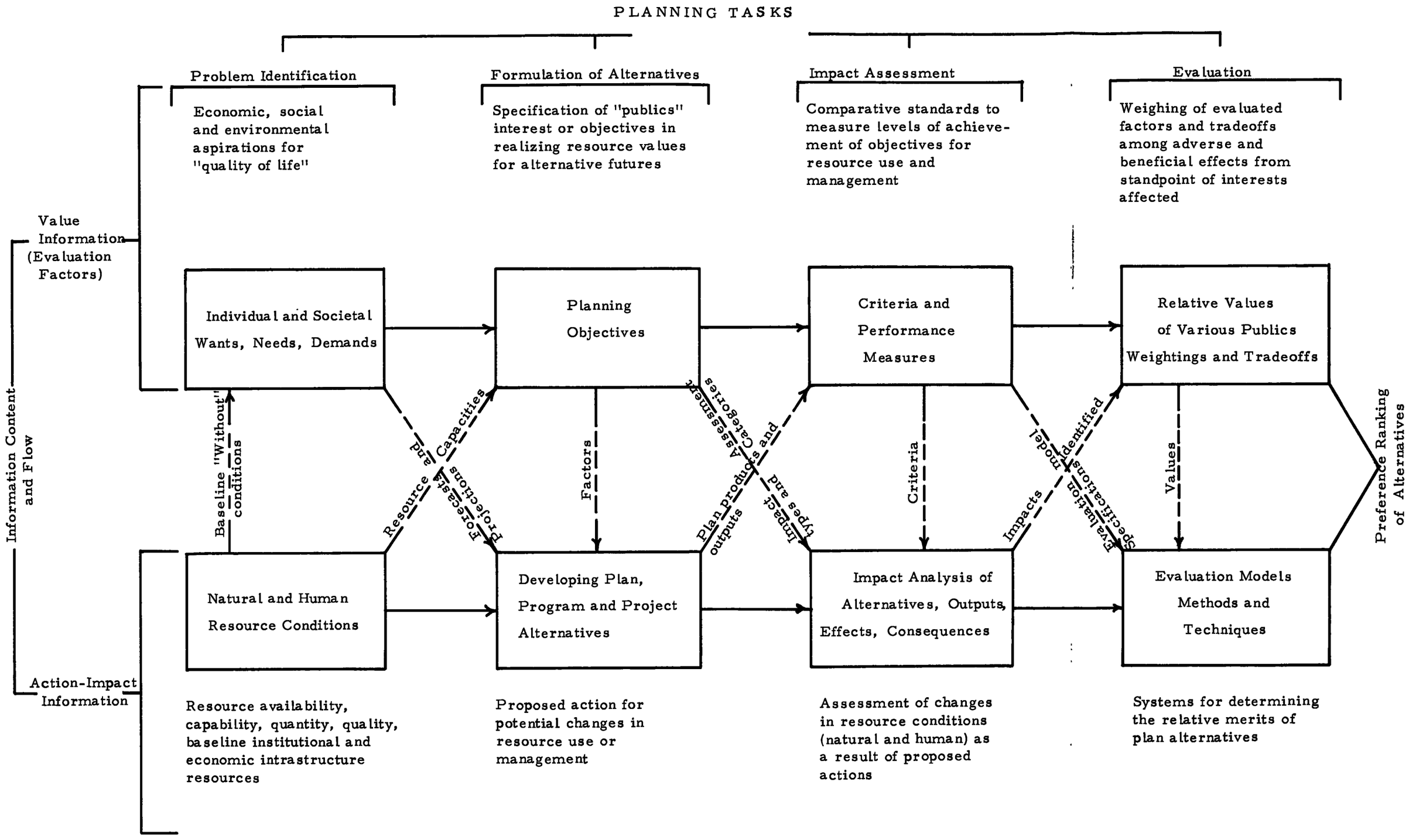


Figure 1-2. Information Flow in the Planning Process.

Viewed from the perspective of the planning process, the vertical relations indicate the information correspondence of the planner and the publics with respect to the tasks and activities with the planning process.

The following examines more closely the information content of the planning process task.

Problem Identification

Societal Wants, Needs and Demand. Individual and societal needs and wants are the underlying basis for identifying water and related land resource problems as perceived by the public. The mechanism which transforms awareness of needs into problems for study is usually the political process. Initial problem statements, such as resolutions authorizing the study, are generally very broad and probably represent only segments of the public. As individuals and interest groups begin to participate, many problem perspectives are likely to be expressed. Furthermore, these will be subject to change through information developed in other planning activities. Problem identification, therefore, begins to set the underlying value themes that will finally plan an important role in evaluation of alternatives.

Natural and Human Resource Conditions. On the planners side of problem identification, information is in terms of natural and human resource conditions. Resource availability and capability might be analyzed in terms of three basic dispositions:

1) to be maintained or invested in particular uses to obtain certain productive outputs, 2) to be preserved or saved for future uses with an eye to net appreciation in potential output, or 3) to be preserved in perpetuity to maintain their "as is" use or productivity. Resource analysis is required to measure the quantity, quality, and capacity of resources of the study area. Initial information may be general, broad resource inventories of the area, and as the study proceeds, especially to the point of alternative formulation, information on resource inputs can be more accurately defined. Again the information content is not static, but will expand and change throughout much of the planning process. As the research better defines the resource inputs, the information base for communication will also be enhanced. Resource analysis relative to aspects of natural and social environments provides a structure for examining resource management options and their impacts on values of society.

A summary type of information in problem identification is to define alternative management futures, i.e., describe problems in terms of present and future ranges of resource capability. These forecasts may be developed through formal projection techniques to establish a "without" plan baseline and pinpoint future problem areas.

Formulation of Alternatives

Planning Objectives. While publically expressed wants and resource conditions provide descriptions of problems of resources used and management,

it is essential to have sets of objectives against which to formulate plans for how resources ought to be used to solve those problems. In effect, objectives translate desired futures into operational terms by stating the conditions to be met in planning a solution. At the same time, they provide a basis for establishing criteria against which the viability of alternatives can be judged. In delineating components of the two national objectives for water resources planning (Water Resources Council, 1973, p. 6) as illustrated in Figure I-3, it should be recognized that not all of them will be compatible and that there is a multiplicity of objectives which are continually changing with time. It usually becomes necessary to work with several sets of objectives, which reflect the desired planning accomplishments of diverse groups, in which each set essentially represents the development of a different alternative plan.

Developing Alternatives. Alternative formulation is primarily a function of the planner, with inputs from other community sources in order to cover the range of possible changes in resource management and use. Information as to the structural and non-structural aspects of a plan should be described and feedback solicited from individuals, interest groups and other agencies. The development of alternatives is particularly important since the most sophisticated evaluation process cannot succeed if the best alternative is not included in the list of alternatives to be considered. Generally, some alternatives will be suggested at the outset of the process. These initial alternatives are modified or rejected through exchange of information and data through

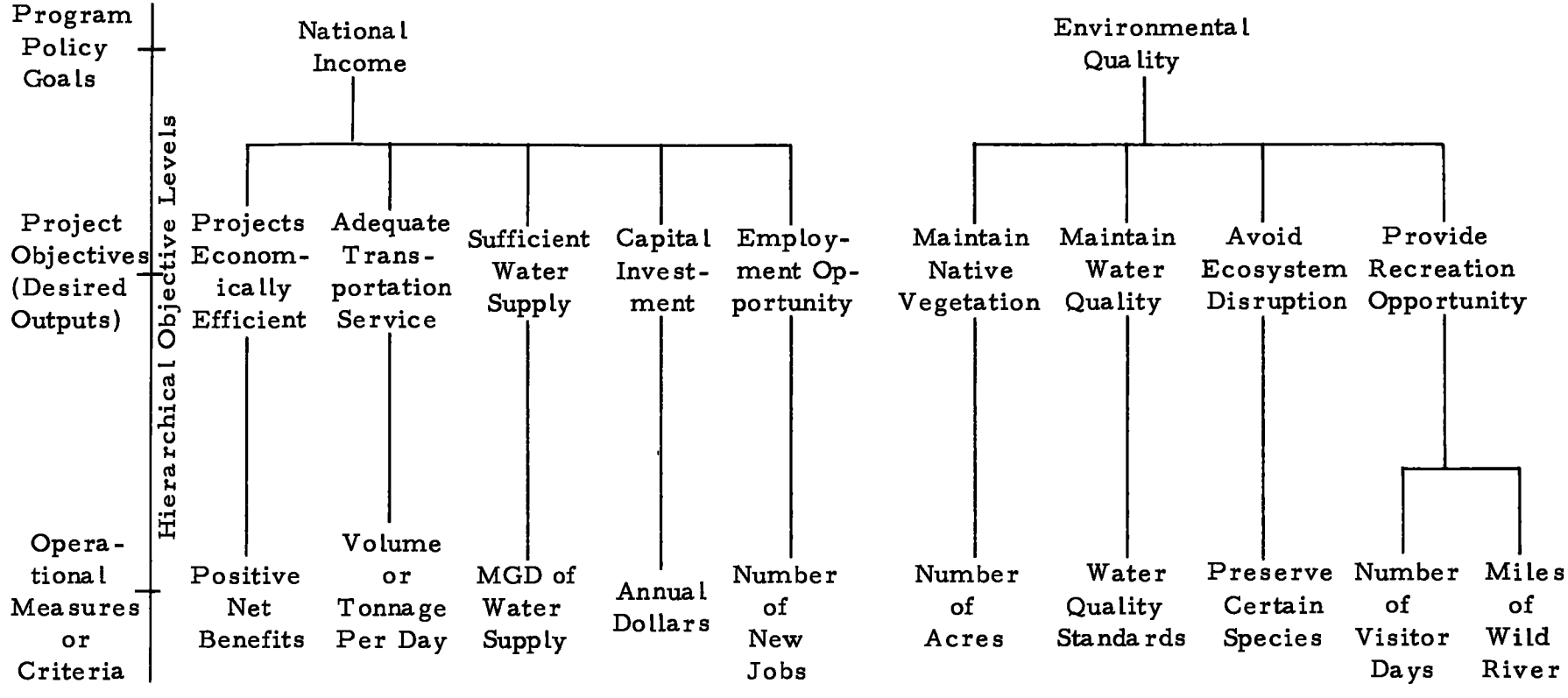


Figure 1-3. Component structure of planning objectives.

participative and decision-making mechanisms.

Impact Assessment

Criteria and Performance Measures. Criteria are the standards or measures of the plans' achievement of objectives. Criteria will, of course, change as the objectives change, but they may also change as objectives are better defined through new information in the planning process. As an example, if the objective is more employment in the study region, the criteria might be the number of new jobs provided by an alternative. But if the objective upon closer examination is better defined as more employment for those living in the study region, the criteria becomes the number of jobs an alternative offers to those who are presently unemployed in the region. An alternative under the first criteria may be attractive because it would show a great number of jobs created, but under the second criteria, it may not be so favorable since it will only attract new labor to the area and not solve an unemployment problem. The key in specifying criteria, then, is that the measure should reflect the nature and types of impacts that are of concern and that are attributable to the public's values.

Impact Analysis. Impact analysis seeks to determine the changes in resource values resulting from proposed alternative plans. Change or impact is measured in terms of the criteria accepted as standards of judgment to be applied by planners or technical specialists.

Hence, an impact analysis of changes in resource conditions must be logically linked to performance criteria which are evaluative concerns of publics. While the measurement of impacts falls to the planning professional, the identification of impacts can be greatly facilitated by information exchanged with community groups. Since proposed actions are continually modified so also will the impacts change, and impact analysis will suggest where severe impacts may be mitigated by modifying alternatives. However, so far as evaluation is concerned the labeling of a particular impact as beneficial or adverse may be a matter of viewpoint, again an issue that can be explored through information exchange during planning.

Evaluation

Public's Value Inputs. Evaluation seeks to assess the difference in the impacts of alternatives in terms of the importance or significance of the value attached to the impact by those affected. The evaluation is an expression of preference for certain combinations of positive and negative impacts, and values are a primary information input of the publics. The impact of one alternative carries little significance until compared with impacts of other alternatives. So, we find this activity to be a comparative process. Communication techniques and processes are the keys to ranking of alternatives.

This may require several iterations as changes in the alternatives are suggested and evaluated.

The Planning Process and Communication

Communication, as the basic component of public participation in water resources planning, must be a continuous function throughout the planning process. Communication, then, serves an essential information exchange, processing and evaluation function that drives the planning process towards decisions. When working in his communications role, the planner generally operates in two different modes: in one, he applies his professional expertise in collecting and using information to make professional evaluations and judgments as he plans; in the other, he organizes and processes information and data for publics to analyze, evaluate, and provide feedback. Communication between planner and public then is the heart of citizen participation in the planning process.

If public involvement in planning is to be sought, there should be a stronger and more specific basis for doing so than simply "it's a good thing to do." Without a clear and well-defined set of objectives, attempts at communication with the public may result in useless waste of resources or counter-productive communications and contacts. Two overall objectives are relevant to communication in all the four basic activities in the planning process. Example applications are noted under each objective.

1. Information, education, and liaison.

    a. Educate citizenry on planning process, and purpose, and how they can participate.

    b. Disseminate information on study alternatives and findings.

    c. Disclose data on environmental, social, and economic impacts.

2. Reaction and feedback on proposals.

    a. Assess impacts of actions deemed important by publics.

    b. Probe perception of action and resource interrelations.

Relating more specifically to the various tasks in the planning process, suggests the further definition of objectives:

(Examples are again noted below the objective.)

1. Identify problems, needs, issues and concerns.

    a. Identify "critical resources" important to publics in the area.

    b. Define areas of social, economic, and environmental problems and needs and the relation to purposes for which project is under study.

2. Idea generation and problem solving.

    a. Surface alternatives which haven't been considered.

    b. Brainstorm ideas for mitigating measures for adverse environmental effects.

3. Review and comment on planning data and analyses.

    a. Provide information about the significance of impacts as well as those that are quantified.

    b. React to or indicate incidence of impacts on public groups--who is hurt and who is helped.

    c. Suggest mitigating measures to reduce or reverse the consequences of negative impacts.

4. Provide values and preferences for decisions.

   a. Make value trade-offs in selecting among alternatives.

   b. Conflict resolution and consensus.

      (1) Mediate difference between interests.
      (2) Develop mechanisms for compensation.
      (3) Avoid unnecessary and costly litigation.
      (4) Work toward consensus on preferred action.

The planner's role is to see that planning activities are carried out efficiently. The planner also has a responsibility to move the plan toward a decision. Hopefully by structuring a communication program around the objectives indicated for certain activities he can narrow the scope of unanswered questions and unresolved issues during the process and more rapidly approach an acceptable plan. A summary of how these objectives fit with the planning process is shown by the matrix in Figure 1-4. An "X" denotes that the communication objective should be a functional part of the planning activity.

In order for planning to progress, information must flow between the planning activities, since they are interdependent. Some of the information inputs to an activity must come from outside the agency. Thus, there is a need for the agency to communicate with others. This communication provides the planner with information from the publics for the planning activities and it also provides the "publics" with information about the planning results.

PLANNING TASKS

Objectives	Problem Identification	Alternative Formulation	Impact Assessment	Evaluation
Identify needs, issues and concerns	X		X	
Idea generation/problem solving		X	X	
Review and Comment on planning data and Analyses			X	X
Provide values and preferences for Decision	X			X

Figure 1-4. Communications objectives for planning activities.

CHAPTER 2

COMMUNICATION IN THE PLANNING PROCESS

Introduction

A growing concern about the use and allocation of natural resources along with the demand of more and more citizens to participate in resource planning decisions has created an atmosphere in which improved communication between the public and the Corps of Engineers, as an agency responsible for resources management, becomes increasingly important. Poor communication and general misunderstanding by the involved parties in a particular study can produce conflict which may become detrimental to both the public interest and the Corps.

Significant changes in social values have taken place during the past years creating problems between the public and various agencies, including the Corps, and agencies find themselves as coordinators and arbiters among groups with differing ideas, goals, and values. Some of these groups have existed and dealt with the Corps for many years. However, others are relatively new and may be associated with some of the various social and environmental movements which have become popular during the past decade. The various publics affected by the work of the Corps, covering the broad spectrum of the various social, economic and environmental groups, need to be informed about studies

and be able to participate in the planning through effective opportunities for communication.

The importance of the communications role of government agencies is underscored in a study by Bohlen and Beal (1957). They state that:

> In all stages (of the adoption process) the complexity of the idea is related to the choice of sources (of information). The more complex the idea, the greater is the tendency to rely on government agencies.

This fact would seem to reinforce the importance of the Corps of Engineers (or any government agency) developing and maintaining a highly efficient information program to communicate with the public if the Agency's mission is to be accomplished. The Corps' authorities and studies need to be explained and information provided for members of interest groups and the public as a whole. At the same time the Corps needs to better understand the publics that they are trying to serve, so that the needs and values of the various publics can be incorporated into plans. Improved communication is the key to accomplishing these aims. If communication is to be improved, a planner must be able to critically examine the efficiency and effectiveness of his communications during the planning process. A framework for the analysis of communications, adapted from Laswell's (1948) succinct description, is presented in Figure 2-1.

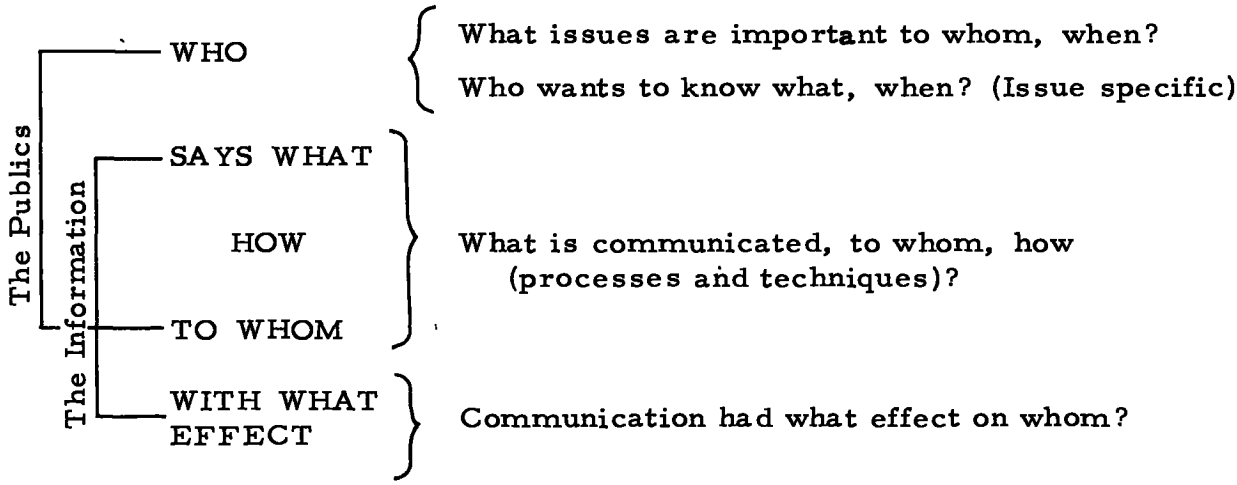


Figure 2-1. A Description of Communications.

Some of the considerations in using this description as a basis for analysis of communications, requirements, and effectiveness in planning are presented in Table 2-1. Types of analyses noted are those commonly used in communications investigation. In relating Laswell's key elements of communication more specifically to water resources planning, this chapter is developed in three sections:

1. Identification of Publics: The Who and to Whom
2. Communication Processes: The How
3. Information and Content: The What and Effects

If the planner conscientiously addresses these questions in developing communications programs, better public participation in planning studies should result.

Identification of Publics: The Who and to Whom

Perhaps the most elusive aspect of "public participation" is the publics themselves. Yet, communication in water resource planning

Table 2-1. Analysis of Communications Functions

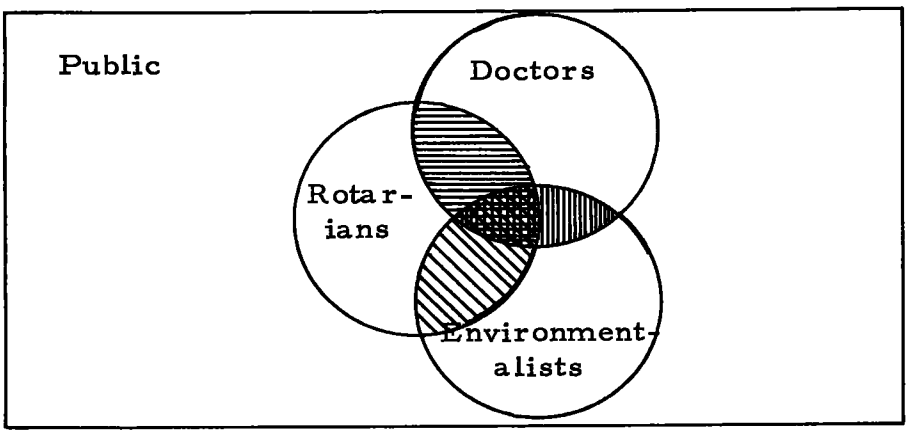
Model Function	Type of Analysis	Components
WHO	Control Participation	Identification of parties involved at phases of planning process.
SAYS WHAT	Message content	1. Issue analysis 2. Message analysis relevant to issues (a) information, (b) persuasion, (c) requests inquiries, (d) attacks or accusations, (e) demands.
IN WHICH CHANNEL	Media	1. Encoding of message (Semantic Noise) a. Written--Technical vs. Layman's language b. Graphical & pictorial forms c. Verbal forms d. Mass media 2. Transmitting Device (Mechanical Noise) a. Written forms (reports, letters, press). b. Mass media (TV, newspapers) c. Group contact forms d. Individual contact forms.
TO WHOM	Audience	1. Frame of reference 2. Social context
WITH WHAT EFFECT	Effect	1. Interpretive response a. Promote understanding? b. Disrupt understanding? 2. Communication Goal: Produce rational decisions. Hence, did communication tend to: a. Reduce conflict? b. Produce conflict?

cannot be independent of the characteristics of the "public". The general public cannot be considered as one body. The public is diffuse, but at the same time highly segmented into interest groups, geographic communities, and individuals. There are sets or groups of "publics" that have common goals, ideals, and values. Any one person may belong to several different sets of these publics since they may be professionally, socially, or politically oriented. The Venn diagram, Figure 2-2, illustrates the overlapping of some of these groups, and the fact that an individual may identify with one, a combination of two, or all three of the groups. Two significant points may be drawn from this in terms of communication.

(1) Individuals are likely associated with various social, economic and cultural orientations from which he draws his information and structures his values.

(2) Multiple association thus allows the opportunity for multiple access to individuals as participants, clients or critics in a planning process.

The key questions in identification of the publics then are: Who are the "publics" that should be involved and how can the planner pinpoint them so he can direct some of his efforts toward them? These questions are difficult to answer in view of the continual flux of the planning process. One thing is sure--the "wait for the public to come to us" approach will not produce effective communication and participation. The agency needs to engage in an aggressive



Persons who are Doctors and Rotarians

Persons who are Doctors and Environmentalists

Persons who are Rotarians and Environmentalists

Persons who are Doctors, Rotarians, and Environmentalists

Figure 2-2. Example of Multiple Public Association.

program to draw out public interests relevant to planning problems. To do this requires a framework for identifying publics that goes well beyond working with particular special interest or client groups. Elements for developing such a framework are organized in Figure 2-3, indicating an identification of participants according to issues and interests and their relation to the study. The matrix illustrates a cross-categorization along two important lines. The first breaks out the groups that have organized along the lines of common interests and issues presently existing within the social and political structure. The second identifies the "publics" relation to the planning study, whether affected by the problem and/or proposed solutions, and in what way. Categorizing publics within this schema is paramount to understanding and recognizing the roles and interests that various groups and individuals will play in a planning study. Circular no. 1165-2-100 from the Office of the Chief of Engineers and dated May 28, 1971 states the following:

> Water resources development impacts broadly on people with different philosophies and points of view and on plans, programs and aspirations of other agencies, groups, organizations and individuals. Public participation must reflect this broad impact. Every effort must be made to identify and bring into the process influential groups and independent individuals (those who do or can significantly influence decisions as well as those who can actually make them). Local, regional and national aspects should be considered. The working list of independent individuals groups and organizations should be continuously reviewed and updated as studies progress.

This advice is of prime importance. Since public participation is essentially a social communication process, without the identification

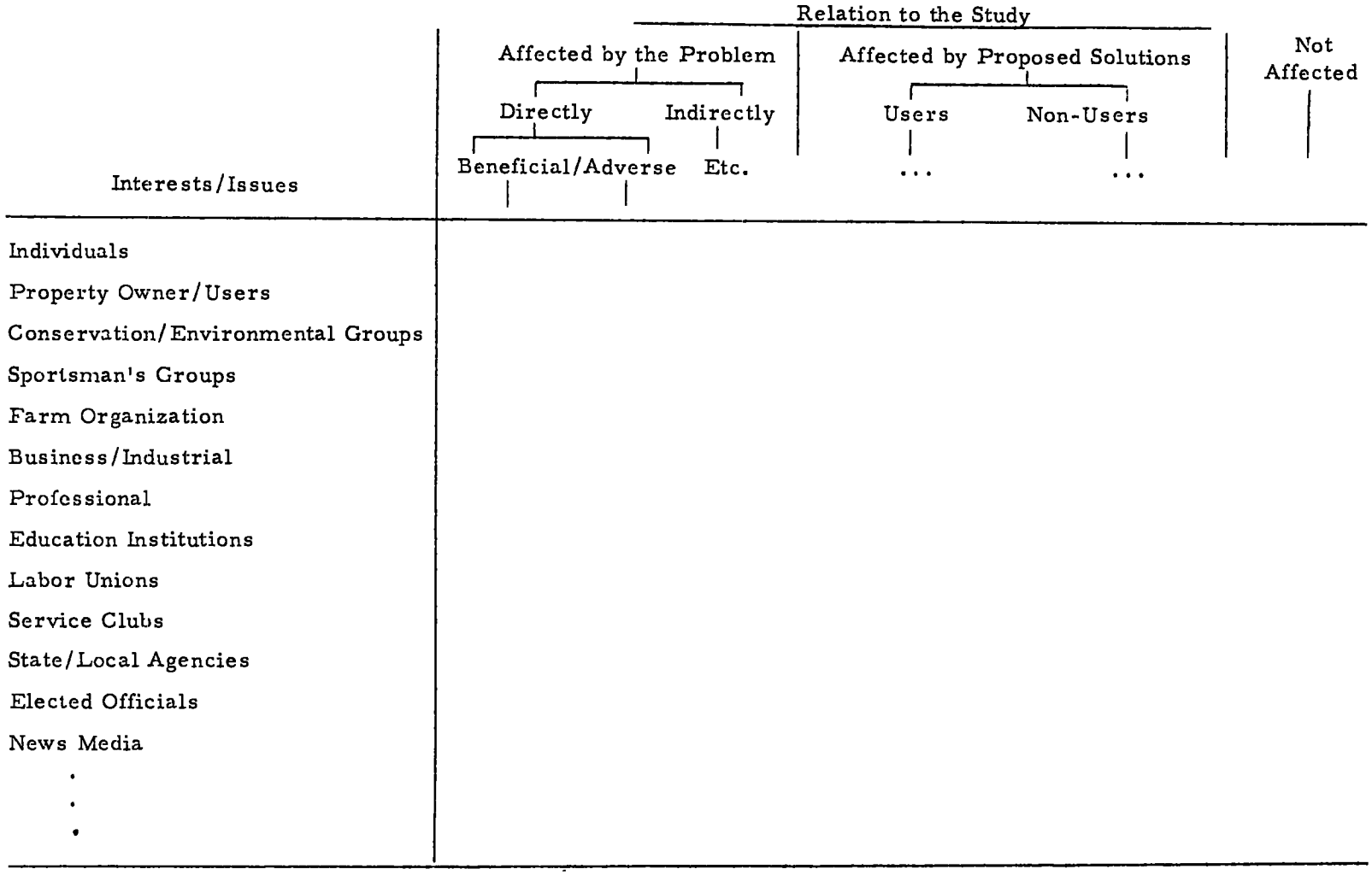


Figure 2-3. Schema for identifying publics.

of the publics involved in this process it cannot operate effectively.

Considerations in Identification of Publics

Identification of publics is an effort to determine who will be communicating in the planning study. This entails not only an inventory of various agencies, organizations, individuals, and influentials, but also some picture of the institutional structure in the study area. Publics can include governmental officials, both elected and non-elected. Non-elected officials will include those working within other operating agencies. Organized groups existing within the region should also be inventoried. Those groups with special interests related to the existing problem and potential solutions will be fairly obvious. However, groups, clubs, and organizations including lodges, civic groups, educational groups, religious groups or organizations, neighborhood groups, professional groups, unions, and any other groups with which persons in the area may become associated should all be considered. In identifying publics, considerations to be kept in mind relating to identification are:

1. Identification Needed for Each Study.

Efforts should be made when identifying the "publics" which may become involved in the planning process to consider both those with whom the agency has previously dealt and those with whom working relations will be needed for the efficacy and effectiveness of a particular study.

2. Identification Continues Throughout Planning Process

Identification of publics should be made not only at the outset of the study but throughout all phases of the planning process.

3. Recognition of Potential for Voluntary Organizations

The potential for the formation of voluntary organizations should be kept in mind as publics are identified. These groups may either favor or oppose potential solution to the problem or may be formed for other reasons related to the study. As an aid in determining if such voluntary groups may develop, planners can look at both the beneficial and adverse effects of the problem on various segments of the public in general. This can include individual citizens or groups who may not have already expressed their preferences through or participated in the types of groups or organizations mentioned earlier. The beneficial and adverse effects should not be limited to economic benefits or impacts. Individual citizens and groups that may be affected by the proposed solutions, and users and non-users of potential solutions are other categories of individuals and groups that may lead to voluntary associations.

4. Recognition of Change in Participants Over-Time

The planner must also be aware that identification of publics has the dimension of participation through time. At the onset of planning a certain segment of the public will have an interest in participating. These are usually people or groups that: 1) have

participated in the past, 2) are affected by a problem, or 3) will be affected by a possible solution to the problem. Circle A in Figure 2-4(a) indicates this identified portion of the public. As planning progresses some of those identified do not participate while some previously unidentified publics will identify themselves. Circle B in Figure 2-4(b) illustrates those who are participating after the process has progressed for some time. Looking forward into time, there will always be those who have not been identified who may come into the process. This is shown by Circle C in Figure 2-4(c). Hence, the planner must be prepared to communicate with three sets of publics: 1) those that can be identified and will participate, 2) those that become identified as the process progresses, and 3) those that will be identified in the future. Thus, of the publics initially identified by the agency, some will follow through, others will drop out, and some previously unidentified interests will enter the arena of participation. Indeed, controversies in resource planning have often occurred as a result of new participants entering at the end of the process in opposition to proposed actions. Many of these difficulties might be averted if the agency had a clairvoyant on its staff. Personnel with this qualification being hard to come by, three other approaches can be taken: 1) actively seek out and engage at the outset of a study a broad and representative range of public interests, 2) keep as much flexibility for as long in the process as possible insofar as selecting a plan or recommending action, and

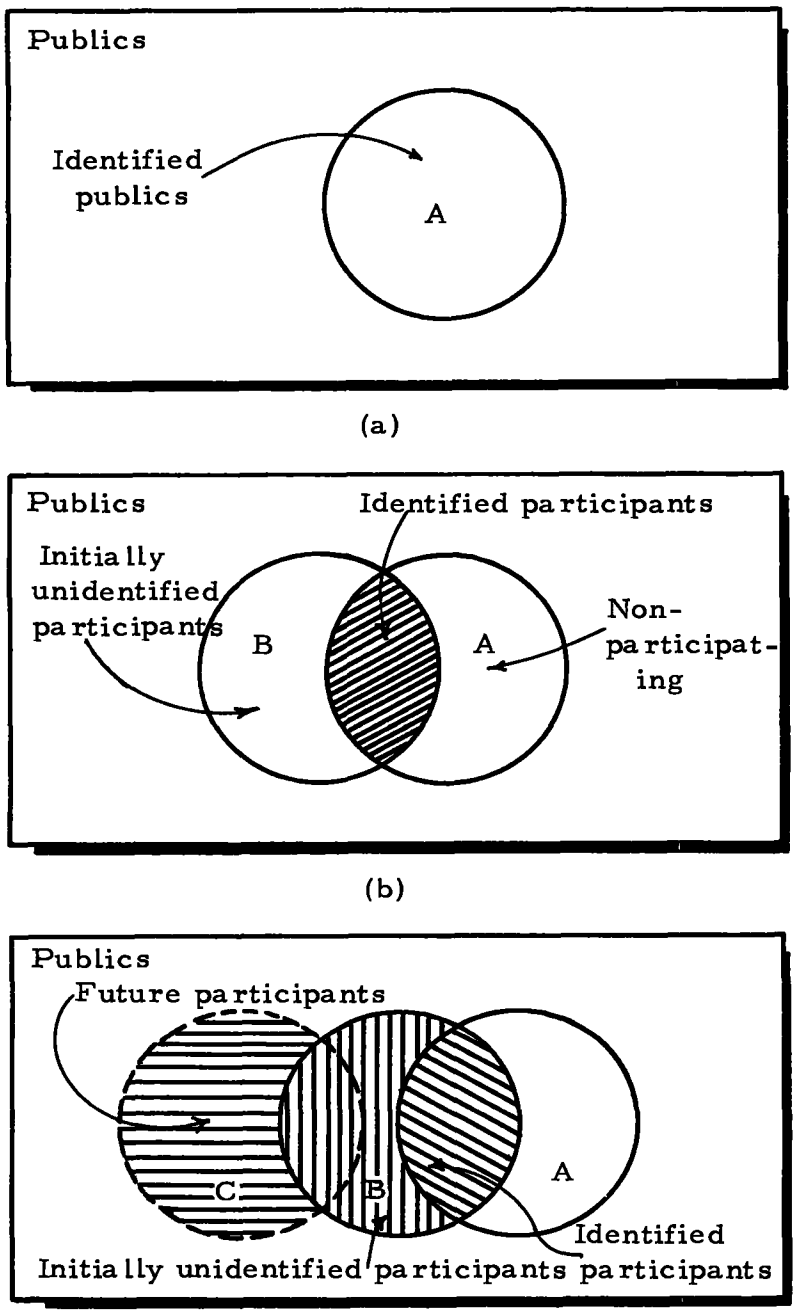


Figure 2-4. A temporal perspective of identification of publics.

3) document the process and the public inputs relating to alternatives and impacts studied.

Summarizing these points suggests that certain interest groups may choose not to participate while others will be adamant about being included in everything. As a general rule the agency should provide the opportunity for all to participate. The publics may choose to respond or not to respond. It is their prerogative. But the agency should make the choice available.

Techniques for Identification of Publics

There are a number of techniques available for identifying publics with whom communication should be established in a planning study. The techniques which can be most satisfactorily employed by the agency will of course depend on time, staff, and budget limitations, as well as the particular nature of the study itself. Basic approaches to identification, as noted by Willeke (1974), can be classified generally into three groups: 1) self identification, with or without staff help, 2) staff identification, and 3) third party identification. It is likely, and probably desirable, for the planner to use methods from three groups to adequately identify publics in a planning study. The following abstracts from Willeke (1974) the essentials of these identification techniques:

Self identification. "Citizens may identify themselves by corresponding with the planning agency or a related agency and by appearing at public meetings dealing with water resources planning. The

usefulness of such means can be enhanced with little effort and cost. At public meetings, identification cards with space for supplying information useful in categorizing and correctly corresponding with the person or group can be used. In newsletters and general circulation newspapers, advertisements may be taken with the same kind of information requested. A toll-free telephone number may be established for those who would prefer to communicate by telephone. Radio and television announcements may be used to publicize the willingness and desire on the part of the planner to have people identify themselves."

Third party identification. "Third party identification is much like self identification except that it is done by someone else. One purpose of citizen committees may be to identify those groups and individuals who should be involved in planning or who are affected by proposed plan alternatives."

Staff identification. "While in self identification and third party identification, the planner's role is primarily that of a facilitator, in staff identification, nearly all the work involved in identifying publics is done by the agency."

1. Analysis of associations. "Analysis of associations is a process of consulting available lists of organized groups and picking out those who appear to the planner to have possible interest in being involved. Having identified a tentative list of interested groups, the groups are contacted and queried about their interest. Lists of

associations are usually available in any community, though the lists are almost always incomplete. The Yellow Pages of the telephone directory, the Chamber of Commerce, newspaper lists, city and county directories are all ready sources. Going beyond these free lists, available to anyone, there are lists available on a national and state basis, sorted by ZIP code, and categorized by type. The cost is quite low, about $25 per thousand addresses, with a 10 percent surcharge for State selections. Sociology and political science departments at local colleges and universities often maintain lists of organizations in a particular area."

2. Geographic analysis. "Geographic analysis involves study of maps and photographs to determine areas that should be singled out for special attention in the planning process. Flood plain dwellers, those downstream from a dam or sewage treatment plant, those displaced by a reservoir, etc., are obvious groups to be identified from map studies."

3. Demographic analysis. "Demographic analysis may be used in two ways, alone and in combination with geographic analysis. When it is used alone, a public is defined as that group of persons having a given set of demographic characteristics. When used in combination with geographic analysis, the demographic analysis is tied in with territories. Thus, in the latter case, one might look for those territories that had unusually high percentages of elderly or nonwhite or middle income or any other characteristics of interest."

When demographic analysis is used alone, its value is primarily as a tool to be used in selecting one-way mass media communication to reach a particular audience. The more useful application of demographic analysis is in combination with geographic analysis. The U.S. Census is the primary source of information on demographic traits. It may be supplemented with special surveys or field work."

4. Historical analysis. "Most water resources projects and programs have a history. The history is documented by reports, correspondence files, and newspaper accounts. Reference to such data can provide a means of discerning what the various publics have been in the past, relative to water resources issues. Historical analysis is made somewhat easier when clipping files are available. Besides the agency itself, newspapers, and libraries sometimes keep such files on particular projects."

5. Field interviews. "The field interview, particularly snowball methods, has been a much-discussed method of identifying publics. In the snowball methods (really a special case of third party identification) the planner begins his work by interviewing a group of prominent people and asking them to identify persons likely to be interested in water resources planning. The process is repeated until no more new names are received. The snowball method will identify those persons who have in the past been influential on an issue, but will not identify less well-known persons who have a legitimate interest in involvement. The snowball methods have become so closely identified

with power structure studies, and there have been so many power structure studies done in U. S. communities that the method has limited value at the present time."

6. Affected publics. "In the latter stages of planning, i. e., at some time after alternatives have been formulated, the planner can identify those groups of people who in some way are likely to be affected by the proposed project or program. This is one of the best ways of rounding out the identification process. Examples of groups that could be identified in this way include those who would gain or lose economically, those physically in the path of some project element, communities whose pattern of activity would have to be changed in some way, etc."

Communications Processes - The How

The "how" of public involvement in the planning process is essentially the application of appropriate communications methods and techniques to engage the participation of the target groups. This section will describe the general framework for communications, while the detailed discussion of methods and techniques will be reserved for Chapter 3. The purpose of this discussion is to provide some insight into the functional elements of communication so that specific methods and techniques can be viewed within a systematic context.

Elements of Communication

The basic elements of communication may be represented by the simple communications model (abstracted from Shannon, 1941;

Schram, 1971; Berlo, 1960; and Willeke, 1974b. An excellent review of communications theory may be found in Kahle and Lee, 1974) shown in Figure 2-5.

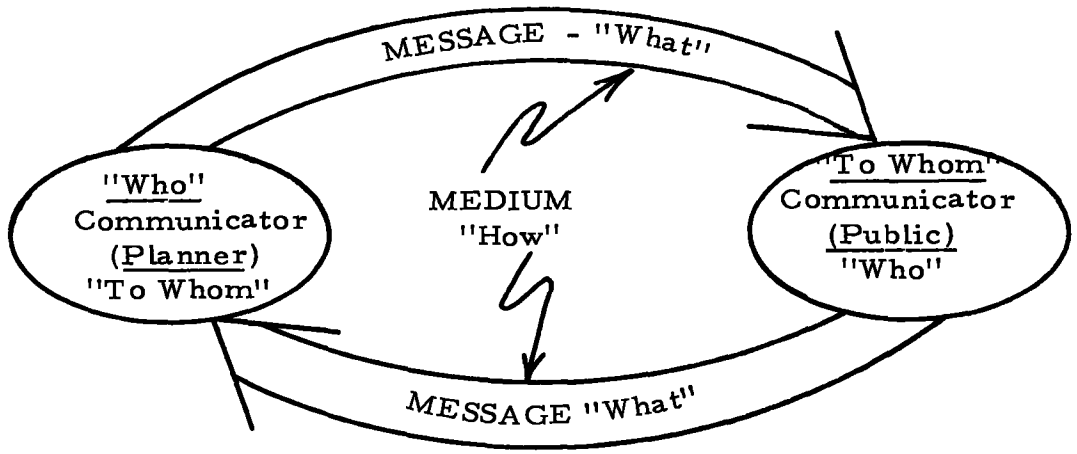


Figure 2-5. Elements of Communication.

Identification of those who should communicate in planning has, of course, been discussed in the previous section. The mechanism by which communication actually takes place is determined by the participants through their selection of message, i.e., the information content of communication, and the format, method, and techniques by which the message will be "transmitted". Effective communication requires not only the dissemination of information, say from planner to public, but also for many purposes the opportunity to complete the loop through feedback, say from public to planner.

Factors Affecting Communication

It should be noted that there are a number of possible disturbances in communications which can hamper effectiveness. These

factors may be conveniently considered in two groups:

1. Frame of Reference. The idea of frame of reference is particularly important to the planner in developing a communication program for a study. As Figure 2-6 illustrates, parties A and B interacting in a communications setting have different frames of reference or experience that they bring to the planning process. The area M represents a commonality in A's and B's frames of reference in which they can communicate effectively with one another. The task of the planner then is to familiarize himself with the background and reference frame of various participants, then structure his message and utilize media which exploit the commonalities of the participant's experience and roles.

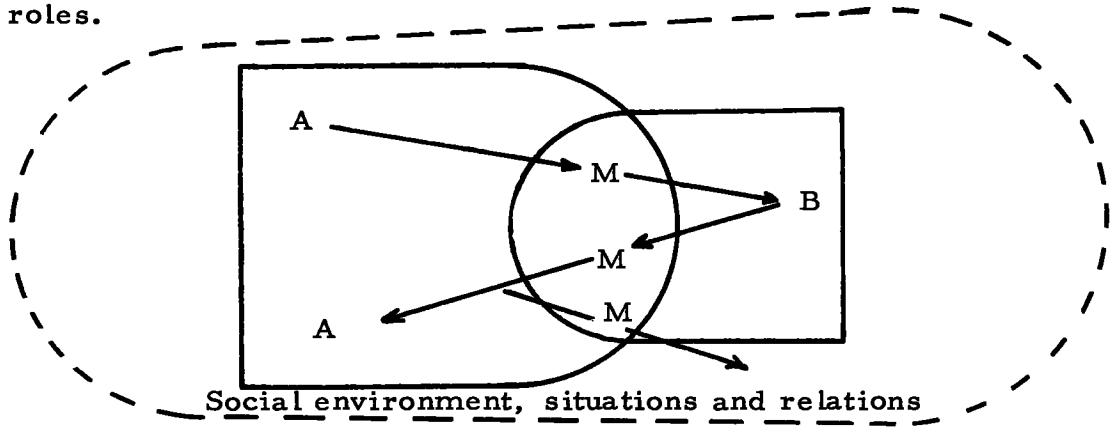


Figure 2-6. Communication within common reference frame.

2. Noise. Types of noise in communication are classified into two groups: as semantic noise, associated with putting information into written, oral, or graphic message forms; and mechanical noise, associated with the medium for transmission, such as mass media, meetings, and so on. Figure 2-7 illustrates how communications noise may arise.

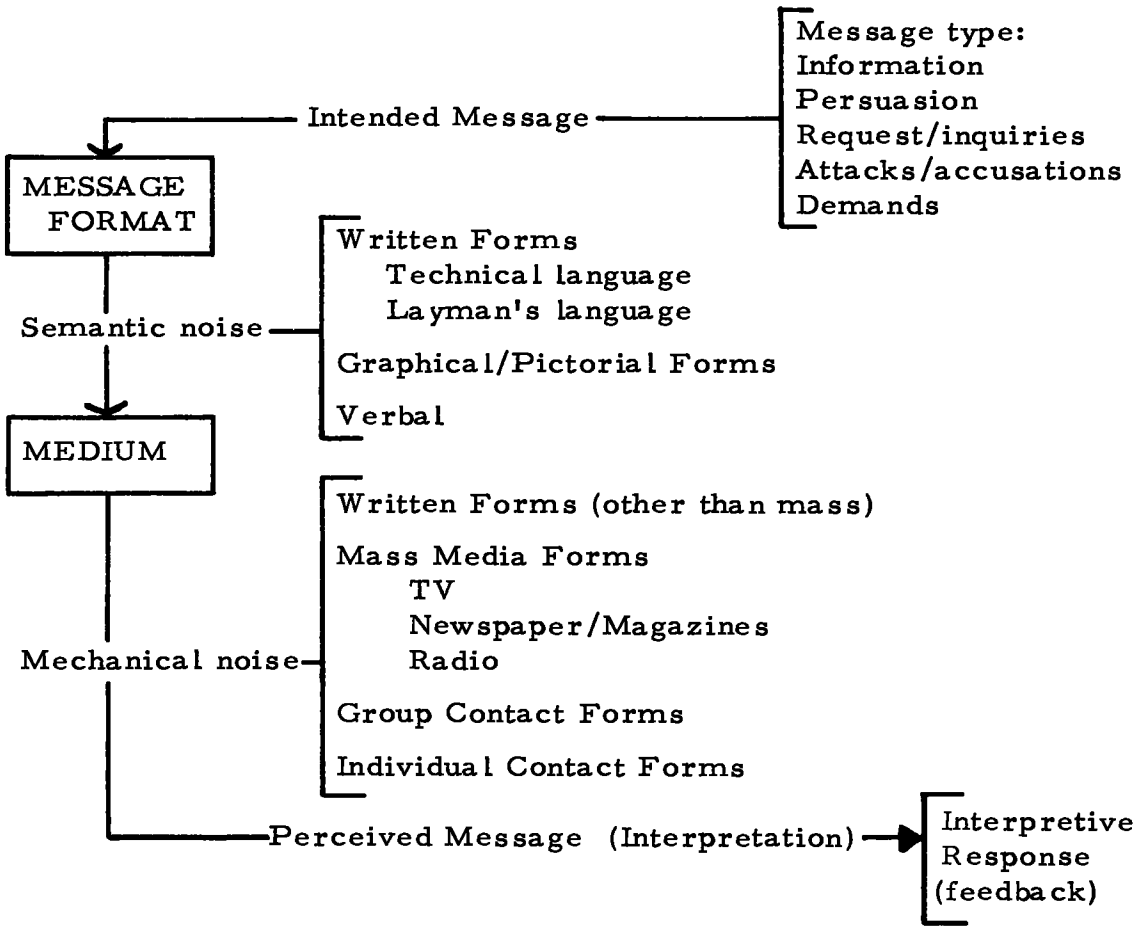


Figure 2-7. Forms of noise in communications.

Since communications effectiveness is conditioned to an extent by the message form and media used for transmission, the use of multiple message formats and media to transmit the same information increases the opportunity to convey a complete message and also the likelihood that the message will be received. From the standpoint of the communicators the process of interpretive responses gives the key as to how problems of noise are overcome. Basically, this is accomplished through feedback on the messages between the communicators. This is illustrated in the diagram of Figure 2-8, where f_1

represents feedback to the planner by observing his own message and f_2 represents the feedback of interpretive response from the public. Through comparison of the two, the sender can evaluate whether the message has been correctly received and if not take further steps to achieve clarification.

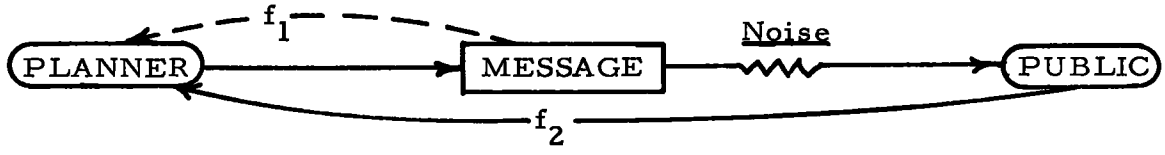


Figure 2-8. Compensation for noise through feedback.

Communications Process Models

The preceeding paragraphs have taken essentially a micro view of communication in looking at basic elements. For an overall perspective, communications interchanges should also be viewed within the multi-public context of the planning process. In structuring communications programs in this multi-public social setting, four basic kinds of processes seem appropriate in meeting the basic objectives of public participation:

1. Diffusion processes. The earlier reference to multiple media also points to the possibility of multiple access to target groups or publics through the communications system. An operational example of this is illustrated in Figure 2-9. In this process the agency sends a message via different media to various target groups, who in turn transmit the message to still other groups or individuals. The net result

enables the agency to reach a broader segment of the public in terms of the total impact than just the initial target group.

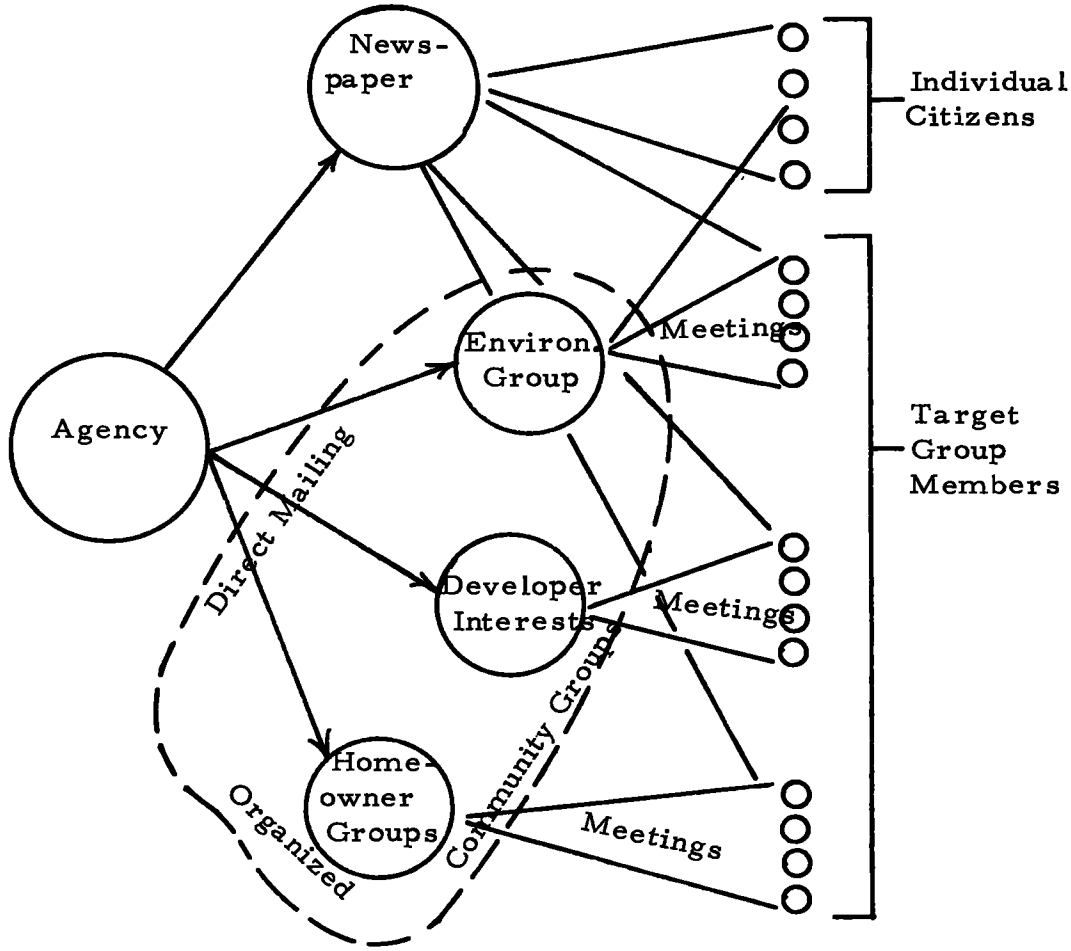


Figure 2-9. Example of a diffusion process.

The diagram brings out three important points. First, communication is not just a single, but a multi-step process where target groups become senders in transferring a message to others through media which they can access. Correlary to this is the fact that the sender cannot completely control the communication process since intermediaries are present to influence or interrupt the process. Second,

a target public can be contacted through several media, thus giving opportunity for reinforcing and clarifying the message. Third, if some media are inoperative due to frame of reference or noise problems the diffusion process can still get the message to target groups through other media types.

2. Collection processes. The collection process can be seen as diffusion in reverse. It may serve to obtain feedback to complete a communication link or to collect information. The messages may or may not return by the same media channels.

3. Interaction process. Interaction describes the situation where communication is an interchange among several groups, as illustrated in Figure 2-10. The agency may assume the central role in acting as a moderator and facilitator in the communication exchange

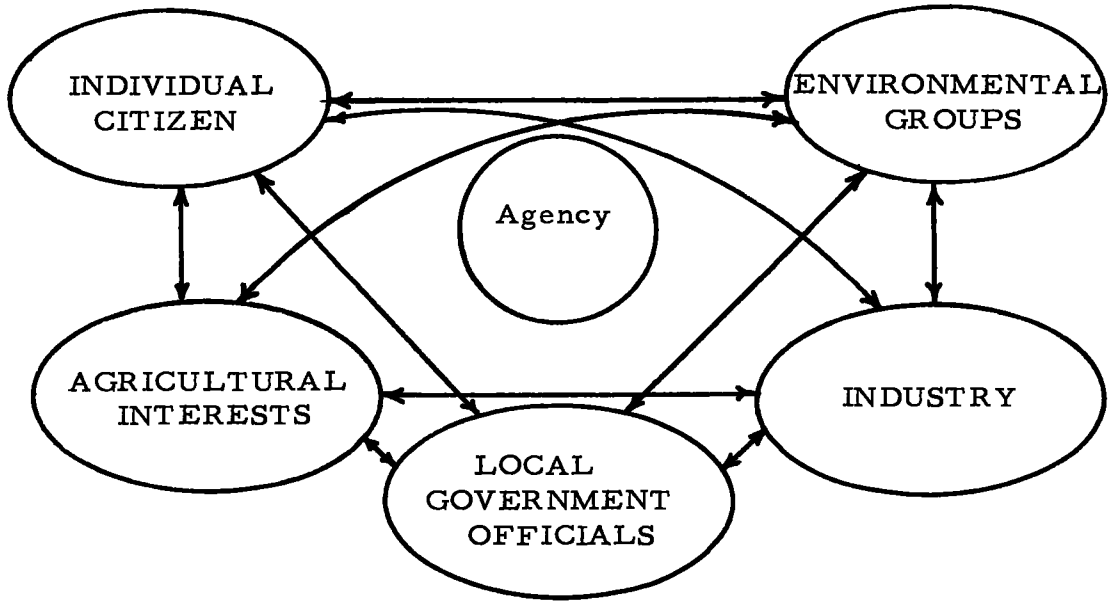


Figure 2-10. An interaction process.

among other groups, or may simply take the role of one of the

communicators in the interaction. The interactive processes generally imply communications media which involve meetings, work groups, committees, advisory panels and the like.

4. Diffusion-collection processes. This process describes the situation where information is disseminated with the specific intent of eliciting some desired information in response. Usually, the mechanism or medium for response will be specified or provided in order to facilitate information collection. A simple example is a questionnaire that is sent to some public groups and to a newspaper (See Figure 2-9). Target publics are asked to send their responses by individual letter to the agency as the originator of the questionnaire.

To summarize, it is interesting to match the communications process models with the key action words found in statements of communications objectives in Chapter 1. These cross-comparisons, organized in Figure 2-11, can help to select an appropriate communications approach to meet a particular information objective in the planning process. For example, inform, educate, and liaison objectives are all dependent on dissemination of information. The diffusion model describes this process. Identification, assessment, and feedback are objectives that are described by the reverse, the collection model. Idea generation, problem-solving, conflict resolution and consensus are generally best accomplished by interaction processes. Review, reaction, and evaluation objectives require a

two-step process. An information "stimulus" is first directed to the "publics", then the publics respond with their reactions or evaluations. A total communication process will usually require all of these processes.

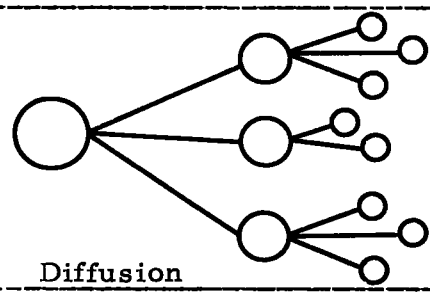
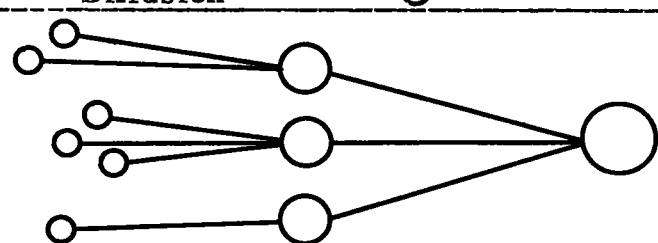
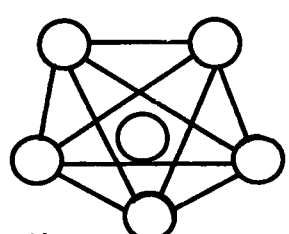
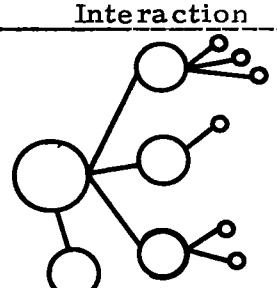
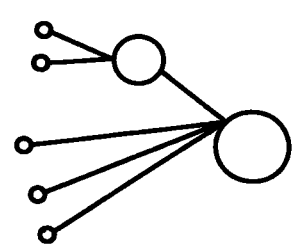
Objective, Action, Words	Models
Inform, educate, review, liaison	 Diffusion
Identification, assessment, feedback, liaison	 Collection
Idea generation, problem solving, resolving conflicts, consensus	 Interaction
Reaction, evaluation, review and comment	 Diffusion  Collection

Figure 2-11. Correspondence of communications objectives and models.

Communications Information Content -- The What and With What Effect

To insure that there is "substance" in the communications process, the water resources planner must know what information or message content is appropriate and needed for the various planning tasks at the present stage of the planning process.

Table 2-2 attempts to describe in general terms what the information content is in each planning task. The table also indicates, in general, who the communicators are. Since two-way communication is presupposed, the agency and target groups are "lumped" into the category of communicators. The column headings in the table recognize that the planning process, even though highly interactive and dynamic, will usually progress through three general stages - plan of study, intermediate plans, and detailed plans -- as indicated in Chapter 1. Within the table are noted the communications elements associated with these stages.

If the objectives and desired information for each public participation activity are clearly specified, there is a much better chance for productive communication. The information flow in a study should promote and establish proper roles and relationships between planner and publics. The agency should be legitimized, not only as the expert but also as the facilitator of publicly desired actions. The agency should be thought of as understandable and approachable. The interest groups should consider themselves as sources of input to the planner.

Table 2-2. Information exchange for communications in the planning process.

TASKS / Information Type		Study Stages: Plan of Study	Intermediate Plans	Final Plans
PROBLEM IDENTIFICATION — Societal Wants and Needs	Agency	Broad notification of study authorization and purpose. Forecast socio-economic trends.	Relation of alternative plans in addressing wants and needs.	Determine if any new problems and needs have surface that are not addressed by plans.
	Publics	Expressions of specific problems and study issues perceived by publics. Modify or provide socio-economic forecasts.	Redefinition of perceived problems and needs in light of proposed alternative plans.	Identify any further new problems or needs that should be considered in plans.
PROBLEM IDENTIFICATION — Resource Conditions	Agency	Data on resource capability, quality conditions, baseline economic and social data forecast resource demands.	Improvement of resource conditions resulting from alternative plans, and irreversibles or irretrievable resource commitments.	Update any information on resource conditions relative to plans. Identify necessary local resource inputs to plans.
	Publics	Local knowledge of resource problems and indication of local resource decisions and development plans. Check forecast with local plans.	Re-evaluation of priorities of resource problems and commitments of resources to various social and economic activities.	Determine capabilities to provide resources to meet local responsibilities in plans.
PLAN FORMULATION — Objectives	Agency	Assist in breakdown of economic and environmental objectives if erred from problems and needs.	Indicate the sets of objectives that guided formulation of plans.	Review the final sets of objectives to be addressed by plans.
	Publics	Provide comprehensive sets of objectives through interaction with planners, response and priorities among objectives by various publics.	Review objectives in light of range of alternatives. Modify or redefine objectives where appropriate.	Review and agree upon final sets of objectives to be addressed by plans.
PLAN FORMULATION — Alternatives	Agency	General indications of types of planning solutions to be studied. Identify those within agency authority and those that are not.	Develop range of alternative plans that could be implemented. Solicit modification or ideas on other alternatives.	Interact with concerned publics in developing final set of alternative plans, special measures to modify undesired impacts.
	Publics	Response from public on level of acceptability of types of solutions, areas to be undertaken by local plans.	Respond to agency alternatives, indicate those less acceptable and state reasons. Present other approaches.	Work with agency in finalizing plans, examine compatibility with local planning and resource commitments.
IMPACT ASSESSMENT — Criteria	Agency	Begin initial description of factors for evaluation of plans. Use to develop objective sets and visa versa, indicate performance standards for plan functions.	Complete specification of criteria for measuring plan performance with respect to objectives.	Augment criteria where needed based on experience from impacts of intermediate plans.
	Publics	Indicate desired standards or levels of output from plans desired by publics.	Identify conflicts among evaluative factors or criteria, review sets of measurement for objectives.	Review final criteria impact assessment of final plans.
IMPACT ASSESSMENT — Impacts	Agency	Formulate approach to impact assessment which includes input from knowledgeable public groups. Identify data needs and where local publics can provide information.	Assess effects of intermediate plans using performance criteria to measure economic, environmental and social impacts.	Develop complete description of impacts of alternatives, including information for EIS and Section 122 statements. Determine mitigating measures.
	Publics	Suggest areas where contributions can be made to impact assessments.	Input local perception of impacts. Assist in setting min. or max. acceptable levels of positive or negative impacts.	Local perception of impacts. Assist in determining differential effects on various publics.
EVALUATION — Values/ Trade-offs	Agency	Associate general value trade-off areas with problems and needs.	Facilitation of value and trade-off decisions among alternatives through planner/public interaction.	Agency inputs to evaluation and trade-offs, such as agency authorities, cost sharing, etc. Rank alternatives for various publics.
	Publics	Express important values in relation to identified problems and needs.	Weighing and evaluation of trade-offs among adverse and beneficial effects from viewpoint of interests affected.	Final preferences among alternative plans, trade-off negotiation for selection of preferred plan.
EVALUATION — Evaluation Methods	Agency	Preliminary identification of evaluative approaches for presenting choices to publics.	Framing and organizing impact information through appropriate evaluative methods for presenting to publics.	Structure final evaluation and trade-off procedures, develop impact performance analyses, and identify trade-offs.
	Publics	Expression of desired procedures for evaluating and selecting among alternatives.	Agreement on procedures for evaluation and roles of participating publics.	Roles and participation of publics in evaluation, procedures for resolving conflicts in achieving concensus on plan where possible.

Other agencies' roles as information sources should be outlined. Finally, the involved publics should be made aware of what will be done with the results of the planning effort. As a final ranking of alternatives nears, it is important for the agency to establish continuing relationships in order to maintain communication after decisions have been reached so that the various interests do not lose track of the process through Congressional acceptance, funding, implementation, and operation.

CHAPTER 3

COMMUNICATIONS TECHNIQUES FOR PUBLIC INVOLVEMENT

Capability and Function of Techniques and Media

Information must be communicated between agency and publics through some medium in order to accomplish the desired participatory objectives. The selection of the media, or the public participation techniques to be used, depends on the type of information to be communicated, the publics at which it is directed, and the response or feedback that is desired. Figure 3-1 presents a list of public participation methods that have been used in planning studies. The Figure gives an overview and perspective of communication techniques available for the inclusion of various publics into the planning process. It summarizes their characteristics as communication mechanisms and indicates the techniques most compatible with specific public participation objectives. It also provides a functional orientation of the techniques as to the level of public contact achieved, the ability to handle specific interests, and the degree of two way interaction or communication. The following further defines the three characteristics of public participation techniques noted in the Figure:

1. Level of public contact. This refers to the number of people participating in the planning process through a given technique. Low

Communication Characteristics			Public Participation Techniques	Communication Objectives					
				General		Specific			
Level of Public Contact Achieved	Ability to Handle Specific Interest	Degree of 2-Way Communication		Inform/Educate	Reaction/Feedback	Identify needs, issues, concerns	Get ideas/Solve Problems	Review and Comment on Data and Analyses	Provide Preferences Resolve Conflict/ Consensus
M	L	L	Public Hearings		X	X		X	
M	L	M	Public Meetings	X	X	X		X	
L	M	H	Informal Small Group Meetings	X	X	X	X	X	X
M	L	M	General Public Information Meetings	X					
L	M	M	Presentations to Community Organization	X	X	X			
L	H	H	Information Coordination Seminars	X	X			X	
L	M	L	Operating Field Offices		X	X	X	X	
L	H	H	Local Planning Visits		X	X		X	
L	H	L	Planning Brochures and Workbooks	X	X		X	X	
M	M	L	Information Brochures and Pamphlets	X					
L	H	H	Field Trips and Site Visits	X		X			
H	L	M	Public Displays	X	X		X	X	
M	L	M	Model Demonstration Projects	X	X			X	X
H	L	L	Material for Mass Media	X					
L	H	M	Response to Public Inquiries	X				X	
H	L	L	Press Releases Inviting Comments	X	X			X	
L	H	L	Letter Requests for Comments		X		X	X	
L	H	H	Employment of Community Residents			X	X		X
L	H	H	Community Interest Advocates				X	X	X
L	H	H	Ombudsman or Representative		X	X	X	X	X
L	H	H	Workshops		X	X	X	X	X
L	H	H	Charettes				X	X	X
L	H	H	Advisory Committees		X	X	X	X	
L	H	H	Task Forces			X	X	X	

L = Low, M = Medium, H = High

Figure 3-1. Capabilities of public participation techniques.

level contact techniques are inherently more effective with small numbers of people than with large. On the other hand, high contact level types of communication are more efficiently used for large scale public contact.

2. Ability to handle specific interests. This indicates the range publics can be reached by a method of communication. Some techniques will involve certain publics more readily than will others. Technique with low specificity will generally involve a wide cross section of publics, where those with high specificity are effective in communicating with specific publics.

3. Degree of interaction. The degree of interaction refers whether the technique tends to serve basically as an information dissemination and collection device, i.e., low interaction one-way communication, or as face to face information exchange mechanism, i.e., high interaction two-way communication.

Also of key importance in designing a public participation program is some idea of which techniques are best suited to accomplishing the particular participation objective. The matrix of Figure 3-1 shows which techniques are most compatible with the various objectives. It is also interesting to note that a given technique carries an objective orientation that is appropriate in relation to numbers and types of people that will be involved. Which techniques to use for the various planning tasks and different stages of the process depends on the particular objectives in communication, the publics to be

contacted, and the desired degree of interaction. Analyzing communication requirements within these functional categorizations should be useful to the planner in structuring a communications program. The matrix, as such, is intended as a tool for characterizing capabilities of techniques, and not as a rigid guide for selecting among techniques. A comprehensive public participation program which is operational throughout the planning process undoubtedly will have to draw on a wide variety of these communication methods. The descriptions of techniques, which inherently contain aspects of both message and medium, are presented in two sections: direct involvement techniques, and mass media and information formats.

Description and Evaluation of Direct Involvement Techniques

Following from this general introduction and categorization of communications techniques, this section is presented to give the planner a more detailed description of the techniques (listed in Figure 3-1) that aim at direct public involvement in planning activities. It is essentially a survey of the more workable and effective techniques available. The variety of communication possibilities that the planner has at his disposal are organized into three groups: public forums, community contacts, and interactive group methods. In structuring a complete communications program, the following descriptions will be useful in identifying techniques that can be used together or in a pattern and those

that can, and in some cases will, be modified to be effective for particular situations (see Ross et al., 1974, for additional discussion of techniques).

Public Forums

The following techniques, more so than many of the others, can serve to contact fairly large numbers of individuals representing diverse public groups. This includes all levels of publics, from the general public to specialized groups and cooperating agencies.

Public hearings. Public hearings still tend to be formal and rather highly structured. However, there seems to be a trend away from this formality while still maintaining appropriate records, i. e., the transcript and written statements for the hearing record. Because of the cost and delay in developing the hearing record, public hearings should generally be used only at stages in the study where a formal record or transcript is required. This is not to say that public hearings do not serve an important function. Although the hearing is more costly and formalized it provides an opportunity for any agency, group or individual to be on permanent public record as having put forth a certain view. In fact, in view of many publics, the hearing, because it has a high degree of legitimacy, is the one place their voice must be heard. This single fact should not be overlooked when considering the virtues of the public hearing. Although hearings have a major advantage in public acceptance there are disadvantages. Bishop (1970, pg. 79) states ". . . public hearings provide no guarantee of representativeness; and thus there is a high potential for bias. The chairman, being from the

agency, may also strongly bias the hearing. Open ended statements presented are often hard to interpret and use in planning, and often persons testifying do not completely understand the issue or the plan on which they are speaking. This is especially true if . . . the plan is first presented and explained at the public hearing." Others have questioned the value of early public hearings since there is little information available at this early stage in the study. Although this is true, initial study hearings have value in establishing the agency as a professional expert willing to consider all views. This can be of benefit in other communication activities as the study progresses the atmosphere of the study can be set by this first meeting. Some districts utilize the hearings as a forum from which to provide information about and discuss alternatives identified through various sources. This is one of the most useful functions a hearing can serve. The Seattle District, for example, uses this approach and feels that by doing so they tend to focus comments on the alternatives. The information used in connection with hearings should be prepared so that useable inputs which avoid general vague comments and emotional arguments are received. The timing of the hearing is variable and must be geared to a study's needs. Some districts are timing their hearings with the production of brochures or public workbooks, again to focus the subject matter of the forum for increased input. This too can be a productive method. However, many of the functional aspects of the hearing can and are being taken over by the less formal, but more workable, public meetings.

Public meetings. The public meeting is less formalized than are hearings and do not require a transcript. However, detailed notes should be kept on file and recorded. These meetings, like the public hearing, provide the opportunity for participation by a wide cross section of the public. Although the tone here is informality, a discussion leader or chairman must maintain control over the meeting to prevent polarization of positions and to keep the meeting on the main issues and topics of discussion. Public meetings seem to have most of the advantages of the hearing without the rigidity and formality and the problems of cost of permanent records. This point becomes significant when a number of meetings are necessary in a study. In keeping with the public meeting's less formal and rigid structure, physical details such as placing the agency staff on the audience level and less formal seating of the audience itself should be used. This applies to meeting organization as well. After the opening statements by the chairman, the meeting can be turned over to the study manager. This tends to give the public the feeling that they are more intimately involved with the study as opposed to upper level staff. For purposes of efficiency this type of forum could often supplant the original hearing concept.

Informal small group meetings. While this type of meeting may take several forms and serve several purposes, the overall format is much the same as a public meeting. In this respect, small group meetings may function as a series of small scale public meetings to allow more intimate contact with publics from various geographic or

interest group areas. General community meetings may be of this sort. Meetings of general interest may be advertised by public notice while others will perhaps be invitational if a particular specialized discussion with key individuals or community leaders is to be held. The basic idea of this meeting, as with large scale forums, is to present information and to ascertain the needs, desires, and opinions of the affected or interested public. The format should emphasize informality to the point of a round table type of discussion if feasible. Again, a discussion leader, preferably the project manager, should exercise a controlling function to prevent community or local factions from polarizing the meeting.

Information and coordination seminars. This technique is not used to inform the general public directly, but functions to inform and coordinate with special interest groups, specific individuals and groups representing segments of the public. Often public interests and needs are voiced through key individuals, elected officials and non-elected leaders, rather than by involvement of the general public. Seminars could be effectively used with the following groups.

1. Community and group leaders - individuals noted for community leadership and action.
2. Public agencies or officials--County Commissioners, Water Control Boards, Highway Departments.
3. Special interest groups--Sierra Club, civic groups, university organizations.

Seminars are an excellent way of keeping elected officials up-to-date on a regular basis, providing specialized information to interest groups

and clarifying policy and plans to any group or agency. These seminars could also aid in developing coordination between cooperating agencies. Seminars can be used as one technique for advanced preparation for workshops and special committees. This is an efficient method of providing select personnel with information necessary to perform a prearranged future function. A major advantage to the seminars is that they have a low time budget. They can be organized on a regularly scheduled basis or only when needed.

Forum of other agencies or groups. Forums of other agencies and groups such as civic group meetings, organization meetings, etc., can also be used for pertinent presentations or statements. These regularly scheduled meetings are an effective avenue for broadening contact during the planning process. Equally important is the opportunity to clarify policy and positions not only to the agency or group, but often directly to their constituency or organization as well. This approach should be utilized to the maximum extent possible by notifying potential audiences of the agencies'availability to provide pertinent information and discussion programs.

Community Contacts

Community contacts include techniques where the planner capitalizes on his role as the planning expert with the agency providing relatively specialized services to the public. These techniques are aimed at making localized types of information available to the public and getting response on local and general study issues. Hence, direct

local contact methods have two general purposes: First, to make the agency available as a specialized information and assistance source; and second, to focus on specific local concerns through use of demonstrations, models, field trips and like approaches. These purposes satisfy both informative and public relations needs as well as collecting information and data and getting reactions. They also have the capability of contacting large numbers of people both directly and indirectly.

Operating field offices. This serves a more or less specialized liaison function between the agency office and the public. In studies necessitating close local contact and coordination it may be used efficiently, particularly if well publicized. The field office can serve a planning study function and also be geared to providing public information. Duration of operation will depend on study planning and information needs. The field office could be of particular value in a controversial study in which the district office, by virtue of distance or other limiting factors, is not readily accessable.

Local planning visits. Community or on-site visits are oriented toward increased understanding and coordination with cooperating agencies, knowledgeable community interest groups, and individuals. The technique should serve a professional function rather than public relations. These visits can have the secondary function of providing advice on community or area problems related to the study. Visits should be tuned to community needs or specific aspects of the study. A practical example of the value of local visits would be liaison work or

advance preparation for workshops. The press can often be usefully included in planning visits.

Technical assistance and coordination. As part of a study the agency may also provide technical expertise to communities and groups for dealing with related planning problems or act as a coordinator among community interests. When an agency conducts a seminar, chairs a small community meeting or cooperates with a community task force, then the agency is providing technical assistance or acting as a coordinator. While such efforts do require commitments of time and some technical resources, the payoff in terms of increased credibility and coordination with local decisions is usually worth it.

Field trips and site visits. These differ from planning visits in that they are primarily non-professional "show-me" trips. These visits can be used to accurately inform public groups, local officials, and the media about the specifics of a plan. Trips can be combined with or considered as field press conferences. In this fashion, the public is informed indirectly through their representatives--either groups or media. This is also excellent advance preparation for an open workshop or a later hearing.

Public displays and model demonstrations. Under appropriate conditions, displays and demonstrations can provide an overview of a project, quick appraisal of alternatives, description of impacts of the project, and information on any number of project-related issues. The

critical factor in good use of public displays seem to be their location and manning. Certainly the best locations are areas of high public use or areas where particular publics may be contacted. Displays may take several forms ranging from a manned project model to an automated slide show. Model demonstrations may be used as a public display or may be considered as an instructional aid at any type of public forum, workshop, or seminar. Displays or demonstrations, to be effective, must be clear, concise and directly related to areas of experience and familiarity of the publics.

Direct Community Representation. Overt and explicit means of maintaining community contact may also be appropriate in circumstances where ongoing representation of specific interests is required. Such direct forms of representation may be accomplished by employment of community residents on the planning teams so that they can devote the necessary time and effort to the study, designation of advocates to specifically voice or represent important views or positions in a study, and the use of one or more ombudsman to coordinate and represent the several interests in the community. Care must be taken in the use of these methods that, in selecting direct representatives, interests in the community are afforded a balanced voice.

Interactive Group Methods

This division includes those techniques that are characterized by a highly interactive group situation, and the approaches are based on a high degree of two way communication. Interactive techniques of this nature have been used successfully in many planning studies and are

recognized to be an extremely efficient way to present, discuss and discover information, point out and resolve planning conflicts, determine public needs, and gauge attitudes towards planning studies.

Workshops. A detailed discussion of the organization, structure and conduct of workshops is presented by Bishop (1970) and Borton, et al. (1970). Since the success of workshops depends, in large part, on the degree of advance preparation this should be as comprehensive as possible. Advance preparation for workshops might include distribution of the various types of brochures, planning visits, coverage by the media and direct contact of interested parties. Workshops can be several types depending on the planning activity and stage of the study, the publics to be contacted, and the subject matter for discussion.

1. Open public workshop. This type of workshop, in practice, is the most common. However, one major disadvantage of the open workshops is the uncertainty in the number of people that will attend, and their interests. With large numbers there is more limited opportunity for discussion and the high degree of interaction that is desired in a workshop.

2. Invitational workshop. As implied by the name, invitational workshops are geared toward particular individuals and groups and around issues or alternatives that are somewhat specific in nature. This type of workshop has the advantage of being highly interactive, involving only interested publics on specific, critical issues.

3. Invitational/Open. This workshop approach, a combination of the first two, provides a means of bringing all concerned publics into the planning process and providing a productive interchange. The

workshop is structured to focus the beginning discussion with an invited group of interests, e.g., a panel, then opening the meeting up to the general public.

There are, of course, several modifications to these three workshop types that can be introduced. Several varieties of mini-workshops are proving to be effective in stimulating interaction. Publics attending a workshop can be divided into small discussion groups, each with a leader, to exchange ideas on different subjects. Under certain circumstances revolving groups can be instituted, where individuals spend a set amount of time on one issue or subject, and then break-up with each individual going to a different group. As with all workshops, but especially the revolving mini-type, adequate pre-workshop preparation is a necessity.

Charettes. The charette functions as a highly intense, resolution oriented meeting. It can be thought of as a "mini" workshop or small select group meeting with the express purpose of reaching a decision or resolving a conflict. The charette goes beyond the interaction levels of an ordinary workshop and is problem solving and decision oriented in its subject matter. Hence, it presupposes a certain amount of advance preparation to assure a thorough understanding of the subject and a common ground on which to begin. Charettes can function at the interagency level, or community level, with special interest groups. In this setting the planner is often a negotiator of community interests. The intensity of charette sessions are certainly not necessary in all planning studies, but in certain cases resolution and/or decision comes only through this type of

interactive situation.

Special committees. Several types of citizens committees have been used in planning studies. Committees, as representative public bodies, can serve a very useful purpose in planning studies, but the overall concept must be well considered before the planner can effectively utilize the committee approach. Types of committees that have functioned in planning studies are the following:

1. Citizens advisory committee. The concept of advisory committee has recently been receiving criticism concerning its role in the planning process. The major question with the role of the CAC is that perhaps it was never advisory and indeed it shouldn't be. It is extremely difficult to determine the extent of the public interests that a committee's advice or actions may represent. Since a committee with a true advisory capacity is difficult to staff with people representing a broad range of community interests as well as expertise pertinent to the study, this type of committee often ends up serving a limited or issue specific function. However, a committee that is broadly representative can be extremely useful as a sounding board for study proposals.

2. Ad hoc task force/ committee. Planning problems of a technical or local nature can often be effectively approached by a committee or task force which works towards solutions and advises the planning agency of local preferences on those particular study problems. A committee or task force should be limited to consideration of a special or regional problem. When controversial aspects of a plan are involved, a group representing all sides of the issue is necessary for lasting

conflict resolution or problem solution. Since both ad hoc committees and special task forces are set up to work on a particular problem area, they should be dissolved once a solution has been rendered.

3. Citizens committees. A new trend in committee roles in the planning process is that of the non advisory, non-debating forum. The task of a citizens committee is threefold:

a. To provide fact supported suggestions or arguments on various problems or issues that might arise.

b. To act as a sounding board to reflect community or sub-regional interests and preferences in regard to issues, alternatives or problems which will arise during the course of the planning study.

c. To act as a catalyst for the expansion of public participation by utilizing other techniques (workshops, small group meetings, etc.); to involve the committee members' constituency by hosting and participating in various public forums; and to bring other participants into the planning process. It is very important to emphasize the idea that this is a nonbiased group working for the good of the community not favoring any special interest group.

The success or failure of citizens committees seems to hinge on selection of committee members and timing. Selection of members often becomes the responsibility of the agency, but organizations or local officials should be invited to designate members, or at least suggest

names. Representatives from certain major groups must be included from the very beginning, with additions or changes being a function of the committee or the supporting organizations. The committee's purpose and the issues to be addressed should also help to determine its membership. Some of the important groups for consideration in committee participation are:

a. State and federal agencies--resource management agencies, public works agencies.

b. Local government--counties, cities, water or grazing districts.

c. Local development organizations--chambers of commerce, industry.

d. Land owners--those affected either directly or indirectly, both rural and urban.

e. Professional and quasi-professional groups--university faculty, media, League of Women Voters.

f. Special groups--those that have a particular social, economic or ethnic interest.

g. Environmental and conservation groups--Sierra Club, Trout Unlimited, Wildlife Federation, etc. (the participation of these groups should, depending on the situation, be extended to their national organization).

Committees are often unproductive because they are initiated too late in the planning study. In this situation, members feel they are little more than a token gesture and can contribute nothing that will influence

what has already been determined. On the other extreme, beginning too early when the members have nothing on which to work may result in apathy and dissolution of the committee.

The citizens committee can be an effective tool for public involvment in planning. Unfortunately, however, there are some major difficulties that have prevented its widespread acceptance. First and foremost of these is the time commitment required of the planners and the participants. The planner usually must spend a great deal of his time organizing and participating in committee functions. The committee members, if they take their task seriously, can also devote a considerable amount of time to the committee. Considering these factors individual citizens committees, on the average, may not have a long life expectancy. In studies where there is not a considerable degree of opposition and interest, apathy takes its toll. This is not to discourage the planner from utilizing citizens committees. On the contrary, they can be one of the better participation tools available. However, it is only realistic to be aware of the disadvantages.

Mass Media: Characteristics and Use

Communication and Mass Media

Effective use of the modern mass media available today is an extremely important element of successful public participation programs. Mass media are identified by their large (mass) audiences, which are, naturally enough, heterogeneous in nature and relatively easily accessible through the more common forms of mass media -- radio, television,

newspapers, magazines, direct mail, motion pictures, cable television, and others.

The mass media provide the receiver an illusion of intimacy and generally are considered to be "official" in character. The mass media are often characterized as being glamorous or appealing since they are able to attract large audiences. At the same time, however, the audience(s) for most forms of mass media are primarily passive in nature, i.e., they simply receive the message as presented without any communicative response on their part. However, numerous provisions for two-way communication from receiver to sender are possible.

The use of mass media for involving the public in decisions of general interest to a community or a region is increasingly being stressed. Researchers have concluded that the mass media are effective not only in selling products and services through advertising, but that the media "have been and will continue to be important in transforming contemporary social life." (Peterson, Jensen and Rivers, 1966, p. 27) It has been further noted that:

> Concerning the newest forms of electronic media, it has been observed that the full social impact of television and radio has not yet been fully gauged or charted, but all preliminary evidence indicates that they represent a major new force in American Society. As television and radio have won the acceptance of the American people, they have tended to establish or support certain social values to accentuate various social trends. Together with the press and movies, television and radio in this way define success for us, and give us many of our values. Television and radio also have a great influence on society by conferring status on issues, persons, organizations, and movements to which broadcast time is made available. (Chester, Garrison and Willis, 1963, p. 3-17).

A study by Kahle and Lee (1974) showed how insight into attitudes towards water resources could be applied in designing an information program using mass media, with special attention to radio and newspapers.

Communication through the use of mass media is an area that has been much neglected in planning. Yet, there exists a wide variety of media for communicating with the public and involving them in the decision-making process. Careful selection and use of mass media techniques can successfully carry a message to large numbers of citizens. While mass media are generally considered to be one-way communication--from sender to receiver--several methods exist to develop two-way communication via the mass media.

The use of mass media techniques in the early stages could center on the introduction of an idea or proposal, or the initiation of the planning process. While those involved in communicating ideas or proposals generally can identify the primary audience which will be interested in the message in the first planning stage, mass media could be used to inform a much wider general audience. Responses from interested persons not previously identified will serve to broaden the list of publics that desire to participate.

The use of media capable of directing a message at specific audiences may be more appropriate during the second stage of a planning study, once all interested participants have been identified. Finally, as alternatives are considered and public preferences are sought and considered, the use of the mass media to insure the participation of all possible interested parties would seem to be appropriate. Over all, the use of mass media would seem profitable in the early stages of the planning process for information dissemination and identification.

Use of mass media may be reduced in favor of more specific and direct communication methods during the middle portion of the study, with renewed broader use of mass media as additional alternatives are considered that might involve additional interested parties.

Characteristics and Use of Mass Media

Mass media can provide a general information background to aid in the various phases of a planning study. A variety of agencies in the federal government including the Bureau of Internal Revenue and Social Security are using mass media to inform the public of their programs and illicit questions from them. Through the use of mass media the public can be informed of important factors concerning the operation of particular agencies and can be given a telephone number or address at which they may contact agency officers in order to receive more information on the subject of interest. Specific media and their characteristics are described in the following paragraphs.

Television. Television in its short history of just over 20 years has become the most popular of all mass media in this country. It commands the largest audience of all communication media. Over 95% of all American homes are equipped with a TV set. More than 30% own two or more TV sets, and more than 1/3 of American homes own color TV receivers. The television audience includes all ages, races, income and education levels. Women dominate the viewing audience overall, but during the hours when men are available to the TV set, their numbers are about equal. Television watching is America's most popular

leisure-time activity. An average of more than 6 hours per day is devoted to television in the typical American home.

Television communication is powerful. Research indicates that up to 60% more learning takes place when two or more senses are involved (such as watching and listening on TV) as compared to using a single sense. Television is concrete in its presentation, rather than abstract. Everyone viewing sees the same picture and hears the same description. Attention is focused on the visual as well as the verbal message.

Local, regional and national audiences are available via television because the local stations, which can originate programs of interest to their local viewers, hook up with adjacent stations for coverage of regional activities or join the national networks for programs of national interest.

The use of television to convey messages (either commercial or public service) is relatively expensive. Production techniques which involve both visual and verbal presentation are also relatively expensive. Television broadcast time is relatively difficult to obtain and may be prohibitive if it is necessary to buy broadcast time.

Cable television. Cable TV is an excellent medium for making creative expression more universally available. It is not a new technique and has been used for many years, primarily in the rural parts of the nation. In areas where a strong television signal is not available to the viewer, ingenious viewers located a useable TV signal on a nearby

mountain top and piped it via coaxial cable into the homes of viewers in the valley below. Today, use of Cable TV is growing even in the large metropolitan centers where tall building and electrical interference can make direct TV reception less than ideal.

The communication possibilities of cable can dramatically increase the existing offerings on TV and open up important new services for the public. Cable TV--the wire with tremendous channel capacity and two-way capability--may well become the most important medium of communication in the future, providing not only entertainment and information to the viewer, but also providing access to many social services for the individual or family.

At the present time, Cable TV can provide local access channels for communication with cable subscribers wherever such a system exists. In the future, the two-way communication channel will become much more available. Or, with advance planning, listeners/viewers feedback can also be provided via telephone facilities which are readily available.

Videotape programs. The television industry has developed and has made wide use of videotape recording of both picture and sound on magnetic tape. This technique permits the use of all of the production techniques and methods of television. It greatly facilitates the use of two or more cameras, film, slides, graphics and similar materials into a single program. Color is also available on some videotape machines. By using videotape production techniques, it is possible

to produce a program which may be used on television, cable TV, or played back to individuals or groups on portable videotape equipment. Production techniques would be similar to that for motion picture film and broadcast videotape, but would offer many economies over these media for localized production, short-term usage, or where color was not an important factor.

Telelecture. When it is necessary to involve an expert in a local meeting or discussion, telelecture equipment available from the local telephone company, can often overcome problems of time, distance and money. With telelecture equipment, a guest speaker can address a group remote from his own office almost anywhere in the world. He can speak to them, present a slide-lecture, or show charts and graphs. Members of the group can, in turn, ask questions and inter-act with the guest just as if he were present in person.

The cost of telelecture equipment installation or rental is moderate, and even inexpensive as compared to paying travel fees, honorarium, etc. Similarly, through the use of telelecture equipment, several meetings can be conducted simultaneously by a single "guest speaker" in one central location, with other meeting places connected so that they can listen and participate with each other. Again, the time and travel of participants can be eliminated or reduced by this method of communication.

Radio. Conventional AM (Amplitude Modulated) radio provides the second largest of all audiences in the mass media. This audience is

also the most quickly available because of the ease of radio broadcast production. While the national radio audience is available through the national radio networks, radio is primarily a local medium of communication because each radio station serves primarily its local (or regional) audience and designs its programs to appeal primarily to a specific segment of the audience which is available within the geographical areas served by that radio station.

The type of an audience reached by each radio station is generally defined by the type of programming (music, news and public affairs) scheduled by that station in an effort to attract as large a segment as possible of the potential listening audience. This audience may vary somewhat over a typical broadcast day--i.e., appealing primarily to the adult audience in the early morning, midday, and early evening; to the homemaker audience during the late afternoon and late evening hours. However, the general style of audience appeal of the station will not vary widely from hour to hour or day to day. Since music is the primary program offering of radio, the type of music selected by each radio station will generally determine the primary audience it appeals to. One radio will choose to play hard rock, another country and western music, while others will select classical or middle-of-the-road music according to the audience they want.

By selecting the proper radio station, and the proper time of day, a user can generally focus his radio messages to reach the type of audience which is of primary interest to him. Managers and Program

Directors of local radio stations will gladly assist the radio user in making this kind of a selection.

Radio has numerous advantages for the user and the listener. AM radio consistently offers one of the largest mass audiences at a minimum cost. For example, radio reaches 77% of all persons over 12-years of age every day, and more than 95% of all such persons in a week. The weekly cumulative audience for radio indicates that 98% of all teenagers listen regularly and 95% of all persons 18-years and over.

Radio is portable and mobile. This means that people listen to the radio everywhere. The personal pocket portable radio makes it possible to listen to radio at home, on the beach, riding a bicycle, relaxing by the pool, or elsewhere. There are more than 75 million automobile radios in use today. Many listeners enjoy music, news and entertainment from the radio while traveling the highways and byways of America.

Mobility makes it easy to originate broadcast from almost anywhere. Compared to originating a television broadcast or making a motion picture, a radio broadcast is simplicity itself. All that is needed is a telephone line (generally provided by the local phone company), or a battery-operated remote transmitter, a tiny amplifier and microphone. With this simple equipment and a broadcaster with experience, radio broadcasts can easily originate in sports stadiums, on-the-street, in city council meetings, from a local business, or from public hearings on events of local interest.

Because of this relative simplicity, radio is comparatively accessible and easy to use. Production expenses are modest, and even broadcast time is relatively inexpensive to purchase. A resulting advantage of radio broadcasting is its immediacy. Events can easily be broadcast live--as they happen--without costly production or delays.

FM (Frequency Modulated) radio is similar in many respects. However, because of its higher quality reception, FM radio generally offers a more selective type of audience. The higher quality of FM transmission encourages wider use of the classical and semi-classical music, thus appealing to a more selective audience. Studies have also revealed that this audience is generally better educated, from the more influential families, and higher income brackets. Because of smaller audiences, FM radio has fewer commercials, and appeals to a different type of radio listener than conventional AM radio. Because of peculiarities of transmission, the geographical coverage of an FM station is generally more limited than an AM station, hence the audience is more local.

Newspapers. Newspapers are and have been traditionally one of the prime sources of news and information for Americans. In recent years, television has become the primary source of news for most Americans, but newspapers continue to provide much more in-depth news coverage than is possible in television or radio.

Newspapers are very popular and studies indicate that 80 to 90% of the homes in many areas subscribe to the local daily newspapers.

Many homes also subscribe to a leading regional or national newspaper in addition to the local paper. Local and regional coverage of news and activities is the feature of most newspapers. Local subscribers want to know what is happening in and around their own community. No other medium provides such in-depth service.

Compared to the electronic media, there is always a short time-lag in the news coverage of newspapers due to mechanical methods of production and distribution. However, the newspaper clippings provide an excellent documentation of events for later reference.

In order to receive maximum benefit from local newspaper coverage of events or activities, it is important to keep the local editor advised of such happenings well in advance. An invitation to attend meetings, hearings, or other events should be extended several days before they occur. If the local editor cannot attend such events, an organization, or agency should offer to have someone in the organization or agency write up the events and possibly supply pictures for the editor's consideration. Manpower shortages are common in most local newspaper, radio and television newsrooms.

Direct mail. The use of direct mail is one of the most expensive, but also one of the most effective means of communication. It is often difficult and costly to obtain the correct mailing list, prepare the printed information, address it and have it delivered to the target groups. However, if these problems can be overcome at a reasonable cost, direct mail can aid in information dissemination by focusing the message to a

selected audience without the wasteful shotgun approach of other media. In addition computers are increasingly being used to personalize and individualize direct mail efforts to overcome the objections of some people to receiving too much junk mail.

In spite of heavy costs for preparation, postage, and audience selection, direct mail can be effectively used to reach a clearly identified audience. It also provides easy two-way communication from the receiver back to the sender, if the audience is properly identified in advance.

Magazines. Magazines, like direct mail, provide the user with a clearly defined, homogeneous audience. Recent changes by certain magazines to provide sub-groups of subscribers with common interests have made this media even more effective in this regard. For example, several Farm Magazines now can provide you with a distribution to only those farmers who are interested in beef cattle production, or corn production. Thus, the intended audience is precisely determined, and efforts and cost are not wasted on the rest of the general audience who are not interested in that particular subject-matter.

Magazines, however, are relatively expensive media for the user. A good sized ad, especially in color, is expensive to purchase. Regional or specialized magazines (appealing to readers of a common special interest) could, however, be most effective in directing a message to that audience.

As with the case of the newspapers, a time factor is involved in the publication and distribution of a magazine. The "lag time" is even longer between the actual event and its publication in a magazine, hence more advance planning is necessary.

Motion pictures. Motion pictures have been used widely to inform and entertain for many years. The basic appeal of the medium is very strong. People like to view movies, even if they are supposed to learn something from them. So long as the movie is also entertaining, most people will watch.

Motion pictures incorporate many of the advantages already ascribed to television. They involve both sight and sound in learning, thus are generally effective. It is easy for the viewer to become personally involved in an effective motion picture. He is caught up in the action, the motion, the adventure of the movie. For certain events, a motion picture can be most persuasive as well as entertaining.

However, motion picture production is relatively expensive. A professionally-produced 16-mm movie takes a large crew of experienced film makers and much expensive equipment. The trend toward production of 8-mm, super-8, and hand-held 16-mm movies is an obvious attempt to overcome these difficulties. However, the quality of the final motion pictures may obviate all of these savings if it does not do the job it was designed to do.

Motion pictures are also relatively short-lived and may become totally obsolete because of a minor change of a law, a news situation,

or even by fashion changes. It is expensive and difficult to up-date a motion picture film to overcome these problems.

Slide-tape presentations. To capitalize on many of the advantages of motion pictures--color, beautiful scenery, representation of actual objects or situations, etc.--the slide-tape presentation offers certain advantages. Using regular 35-mm colored slides, an automated projector (or several), plus a synchronized tape recorder, it is possible to present a visual and sound program that is nearly as attractive as a motion picture and at much less expense. Multiple screen projection, fades, flashes, and other special effects have also made this medium attractive and effective. Besides overcoming many of the costly restrictions of the motion picture film, the slide-tape presentation can be revised or up-dated by the simple procedure of substituting a new 35-mm slide for an obsolete one, or by a new narration tape to reflect a change or to meet the language requirements of another audience.

Formats for Media Communication

Development of written information to be disseminated by the media and directly to individual and groups comprises some of the most important responsibilities that the planner has. Information and data are used throughout the planning study and should serve as an excellent stimulus for feedback. Also, written technical, semi-technical information and data for use by individuals and groups is recognized as necessary for effective presentation of policy, planning or project objectives, timetables, alternatives, etc. This type of information takes several forms

and formats, all of which are useful depending on the planners needs.

Follow-up summaries and notices. Any public gathering that the agency takes part in should not be considered complete until follow-up information is prepared and distributed. This may include requests for comments on subject matter, format, improvements for future meetings, etc., as well as meeting summaries. Information should be structured to stimulate feedback and further involvement, and developed to facilitate dissemination on a personal basis or by means of the media.

Newsletters and fact sheets. Written information should be produced at suitable intervals to provide interested people or the general public with regular, up-to-date reviews of the planning study. It can also stimulate considerable feedback. Any of these written distributions should contain explicit requests for pertinent comments. Information of this sort can be disseminated by a regular mailing list, or random or blanket distribution in a particular area depending on the size of the area and what is to be accomplished. Newsletters and fact sheets may be usefully sent but prior to any public forums or workshops.

Material for mass media. Effective use of mass media requires preparation of material for their use. Production of mass media material can take many forms and is fertile ground for an innovative planner. These may be normal press releases, stories, reports, interviews with the planner, TV coverage at on-site planning or "show me" trips, panel discussion, etc. The various forms of the mass media previously discussed can and should be used, with emphasis, throughout the planning phases.

Response to public inquiries. Quick and adequate response to telephoned or written questions directed to an agency can only increase the agencies' aura of professionalism and may stimulate worthy comments. All people or groups who inquire should be placed on a permanent project mailing list.

Planning brochures or workbooks (technical format). These are not for use by the general public, but by other agencies, groups, or individuals with a degree of professional expertise or access to it. They should provide a written record of alternatives proposed and discarded, by whom and why, and may take the form of modified sections from initial planning studies, impact statements, benefit/cost analyses, etc.

Planning brochures or workbooks (less technical). This type of brochure is prepared for the layman who does not have the technical expertise, but who is willing to spend some time and thought on the information presented. It serves the same purpose as the technical brochure, but with the very important addition that it brings in the opinions of the interested general public. The emphasis should be on a clear, concise text, well presented alternatives, pros and cons, and easily interpreted drawings and/or overlays. Brochures of this type can be used for alternative formulation and evaluation. Therefore, they often may go through a number of drafts to insure inclusion of all pertinent alternatives. The agency should always include a "do nothing" alternative to avoid accusations of suffering from the "do something" syndrome. This type of brochure, professionally planned and compiled, can

serve both the professional and the layman. For an excellent, indepth discussion of a workable public brochure, in theory and practice, the planner is referred to Aggerholm's (1973) evaluation of the Seattle District.

Informational brochures or pamphlets. These are intended to be strictly informational in nature. This type of brochure may serve as a brief introduction to the proposed project and planning study. It may have a basin-wide or quite local focus, or it can cover some particular point or issue of interest. It can be geared to stimulate interest as well as inform.

Summary

A compact summary of effectiveness of various media in reaching a cross-section of publics is presented in Figure 3-2. It attempts to indicate, in general, those medias that have a high, moderate or low effectiveness with a selective classification of publics.

Publics	Public Hearings and Meetings	Printed Brochures	Radio Programs and News	TV Programs and News	Newspaper Articles	Magazine Articles	Direct Mail and Newsletters	Motion Picture Film	Slide-Tape Presentation	Telelecture
Individual Citizens	M	L	H	H	H	L	L	M	M	L
Sportsmen Groups	M	M	M	M	M	H	H	H	H	M
Conservation-Environment Groups	M	M	M	M	M	H	H	H	H	M
Farm Organizations	M	M	M	M	M	H	H	M	M	M
Property Owners and Users	M	L	H	H	H	L	L	M	M	L
Business-Industrial	L	L	M	M	M	M	H	M	M	L
Professional Groups and Organizations	L	L	M	M	M	M	H	M	M	L
Educational Institutions	M	L	L	L	M	M	H	M	M	M
Service Clubs and Civic Organizations	L	L	M	M	M	M	L	H	H	M
Labor Unions	L	L	M	M	M	L	L	M	M	L
State-Local Agencies	H	M	L	L	L	M	H	H	H	H
State-Local Elected Officials	H	M	L	L	L	L	H	H	H	H
Federal Agencies	H	M	L	L	L	L	H	M	M	M
Other Groups and Organizations	H	M	M	M	M	M	H	H	H	M

H = Highly Effective

M = Moderately Effective

L = Least Effective

Figure 3-2. Various "Publics" Using Different Media.

CHAPTER 4

STRUCTURING COMMUNICATIONS PROGRAMS: APPLICATIONS AND EXAMPLES

Introduction

This Chapter focuses on example applications of communications programs for public participation in various aspects of water resources planning. The examples described are illustrative of communications activities related to two important dimensions of the planning setting:

(1) The specific elements--problems, purposes, impacts--to be addressed by the plan.

In terms of these functional elements of plans, the examples deal with two areas in which recent Federal legislation specifically provides for public participation. These are the environmental impact statement process established by the National Environmental Policy Act of 1969 and water quality management under the Federal Water Pollution Control Act Amendments of 1972.

(2) The geographic and demographic character of the planning area.

The three levels of water resources planning (framework, river basin and project) set forth by the Water Resources Council "Principles and Standards" add a geographic dimension that must also be considered in organizing communications for planning studies. Here, the example will examine Level B river basin planning. The study area demographic character, whether primarily urban or rural will likewise affect the

development of appropriate communications strategies. An example to be examined here is the urban studies program in which the Corps is presently involved.

The examples presented are not necessarily intended as models for public involvement programs. Rather, they illustrate public participation considerations associated with unique aspects of particular studies which arise out of requirements of NEPA and FWPCAA-1972, as well as the geographic-demographic setting. Since planning studies generally involve a combination of these dimensions, it follows that most public involvement programs will be an amalgam of approach suggested by the examples.

Public Participation in Components of Plan Formulation

The Water Resource Council's Principles and Standards for Water and Related Land Resources Planning direct that water resources plans should be formulated in keeping with two national objectives, national economic development and environmental quality. To be responsive to these two objectives, plans must consider and incorporate the wide variety of components reflected by Federal legislation pertaining to water resources planning. As summarized in Table 4-1, these include such broad components as recreation (Federal Water Project Recreation Act of 1965), preservation (Wild and Scenic River Act of 1968), environmental quality (National Environmental Policy Act of 1969), economic development (Public Works and Economic Development Act of 1965), and water

Table 4-1. Selected examples of Federal legislation bearing on components of water resources planning.

	Legislation	Planning Components
Early -	Navigation, Rivers and Harbor Acts	Navigation, flood control
1899 -	River and Harbor, refuse	Wastewater discharges
1902 -	Reclamation Act	Irrigation development
1925 -	Survey Reports/Cost estimates	Potential water projects
1936 -	Flood Control Act of 1936	Benefits>Cost
1948 -	80th Cong. Water Pollution Control Act	Water quality
1958 -	Fish and Wildlife Coordination Act	Fish/Wildlife
1963 -	Outdoor Recreation Act	Recreation
1965 -	Federal Water Project Recreation Act	Recreation
1965 -	Water Resources Planning Act	Multi-objective plans
1968 -	Wild and Scenic River Act	Aesthetic and environment
1970 -	National Environmental Policy Act	Environmental impact
1970 -	River and Harbor and Flood Control Act - 1970 (Section 122)	Economic, Social and Environmental Impacts
1972 -	FWPCA Amendments	Water quality, Basin planning

pollution control and water quality management (Federal Water Pollution Control Act Amendments of 1972). The legislative directives on at least two of these component purposes of water resources planning specifically require that the public be involved and be provided opportunities to participate in the planning process. The following examples describe the implications of requirements for public participation on the environmental and water quality purposes of water resources plans, and hence, the whole of the planning process.

Public Participation in the Environmental Impact Assessment Related to Water Resources Plans

An important aspect of the National Environmental Policy Act (NEPA) of 1969 is that it provides a broader base for public involvement in the plans and actions contemplated by the federal resources management agencies. The Council on Environmental Quality (1971) guidelines for Federal Agencies under NEPA state that:

> In accord with the policy of the National Environmental Policy Act and Executive Order 11514, agencies have a responsibility to develop procedures to insure the fullest practicable provision of timely public information and understanding of Federal plans and programs with environmental impact in order to obtain the views of interested parties. These procedures shall include, wherever appropriate, provision for public hearings, and shall provide the public with relevant information, including information on alternative courses of action.

The key issues regarding the public's participatory role in environmental impact assessment center on the questions: What is "timely public information?" What procedures should be used to disseminate it? How should public response be incorporated into the Environmental Impact Statement (EIS), and the plans and actions proposed by the agency?

So far the above issues have been largely handled by agencies along the traditional lines for preparing highway, water resources, airport, navigation, and electrical power plans, i.e., the agency gathers the basic plan formulation data, examines various alternatives, and determines a course of action to be placed before the public in the standard public hearing.

With this approach, the public's opportunity to respond to environmental impact assessment is concentrated at the end of the process and confined to a review and critique of the EIS. This is illustrated by Figure 4-1, which is a generalization of procedures now being followed by most agencies (Environmental Protection Agency, 1973). The diagram highlights some important features missing in public participation in the environmental impact assessment process:

1. There is a notable lack of environmental information available to the public during the bulk of the planning process, when the major resource problems are being identified and defined, data and planning information assembled, and plans formulated and selected.

2. The agency usually determines whether a proposed action is of sufficient magnitude to warrant an EIS. When it decides not to prepare an EIS, the agency may proceed with an action without public notification to their intention not to publish an EIS. In the case of the Department of Transportation and the Environmental Protection Agency, public notice of the status of potential environmental impacts comes either through the issuance of a "negative declaration" that there are no significant environmental impacts of a "notice of intent" to prepare

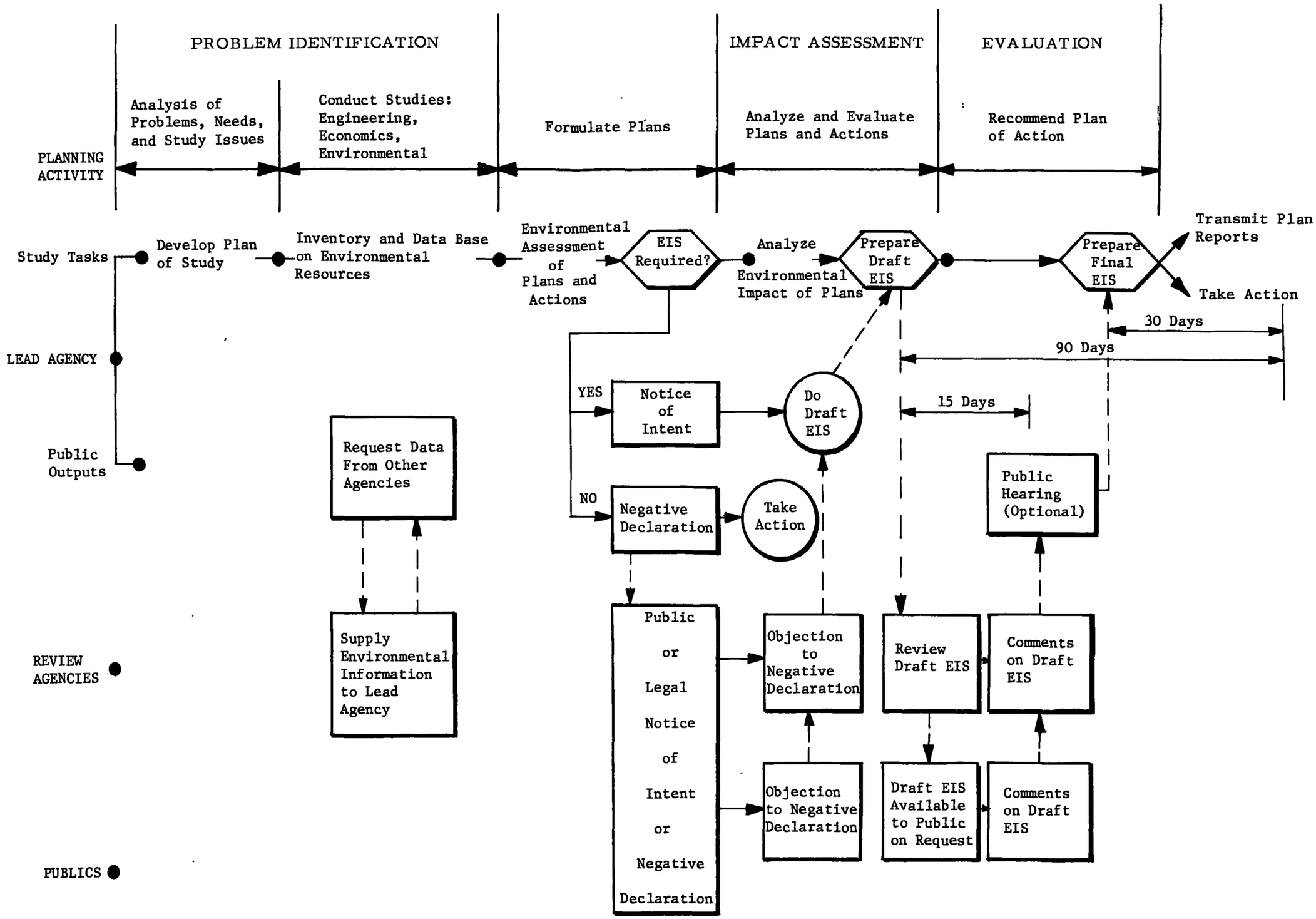


Figure 4-1. Public information in the present EIS process.

an EIS. By responding to the negative declaration the public can make known their perceptions of the seriousness of a project's environmental impacts, but at the same time it may be difficult to react because of limited information about the project.

3. The draft EIS is the major vehicle for public input to the impact assessment process under current procedures. The idea of the draft EIS is an excellent one from the standpoint eliciting public response. Two problems, however, limit its overall effectiveness. First, there is usually no general distribution of a draft EIS to publics and interest groups. Most are made available only on request. Second, the draft EIS is often lengthy and detailed, thus presenting a considerable problem for the average citizen to digest it and respond effectively. These two problems are compounded by the relatively short time periods required between the issuance of the draft EIS and a formal public hearing (15 days) or taking final action (90 days).

As a result of these problems in the present procedures, about the only participatory options open to the public are either to endorse the action or oppose it. This places the agency and the publics in an adversary position and opposition usually focuses on the EIS as a basis for litigation in holding-up or stopping projects. The upshot of this is that the agency submits an EIS, then holds its breath and hopes for the best.

Recognizing these problems in the context of the expanded role of public participation in environmental impact assessment activities of the planning process suggests that the following precepts should apply:

1. That environmental impact assessment must necessarily be an integral part of the planning process, and not merely an exercise in ex post facto justification of environmental impacts or planned actions.
2. A corollary is that the emphasis should shift from the EIS, as an end product, to the EIS as a means of achieving public interaction regarding environmental aspects of plans.

These tenants are reflected in Figure 2, which offers a revised view of how public participation would fit within the environmental impact assessment process. The diagram indicates a continuous flow of information to and from the public at all stages of environmental assessment as an integral part of the water resources planning process. The final Council on Environmental Quality (1973) guidelines have moved closer to this model.

In the early phases of the study, the level of public interaction aims at developing an "overview" impact assessment with public input to identify environmentally sensitive areas and to develop resource and environmental inventories. As the study progresses, involvement focuses on the formulation of alternative courses of action and delineation of their impacts. At this point, a final determination on whether an EIS should be prepared can be made. Either a negative declaration or notice of intent should then be issued as standard practice. The negative declaration procedure provides several beneficial advantages: the public is informed of the agency's determination that there are no serious environmental impacts; if publics disagree there is an opportunity to make it known; and finally, the agency receives early feed-

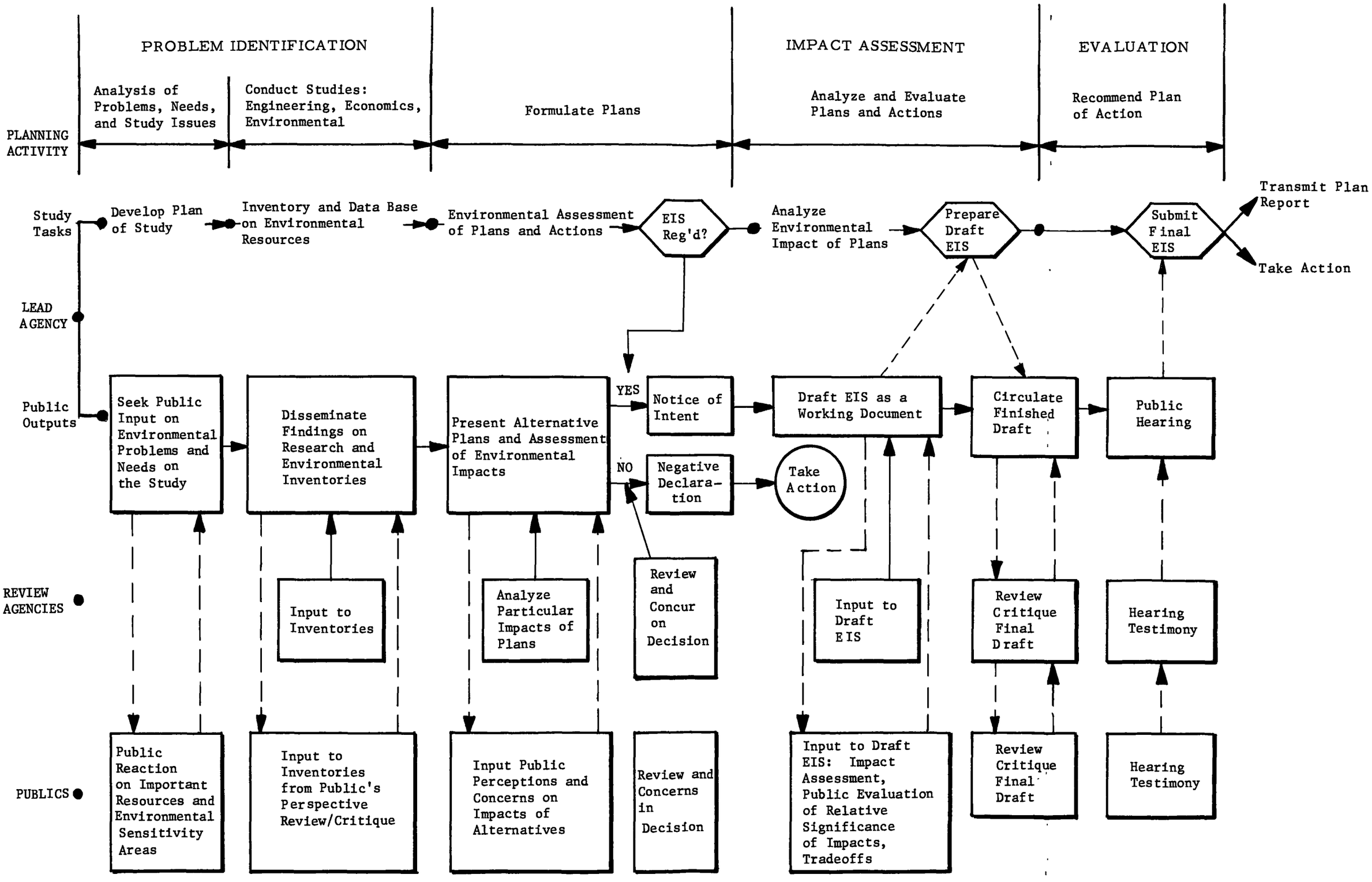


Figure 4-2. Public participation in environmental impact assessment.

back of a possible error in not preparing an impact statement. Likewise, if the agency decides an EIS should be prepared, the notice of intent will alert some public interests that are not yet aware of the study and draw out their participation at an earlier stage during the drafting of the EIS.

By continuing with a well-organized program of public involvement after issuing the notice of intent, the draft EIS can become a working document for interaction among public interests in providing guidance on the environmental effects of each alternative along the lines established by NEPA, Section 102(c):

1. Competing resource usages
2. Short term uses vs. long term productivity
3. Preserving future options vs. irreversible commitments

Public perceptions and consensus in these areas may provide impetus for abandoning highly problematic or controversial solutions in favor of seeking other approaches to mitigate serious environmental damages.

The draft EIS then represents a documentation of public input to the process and most public interest groups should be familiar with its content. Under this mode of operation, it seems desirable in many cases to simply discuss the alternatives without favoring any particular one, unless there is a high degree of consensus for a certain course of action. A circulation of the final draft and a formal public hearing provides a final check to insure that all important considerations have been taken into account, and will appropriately be summarized in the final EIS.

To summarize, the thrust of this discussion is toward the integration of the EIS process of NEPA with the usual survey report and public involvement functions of water resources planning. With the implementation of NEPA, CEQ set down formal requirements for both the public involvement and the preparation of environmental impact statements. Consequently, the EIS has become an additional information document in the planning study and the public involvement program. As such, it must be coordinated with other elements of the study developed in the survey report. With the existence of what are, in effect, two planning documents, there may be a tendency for groups to base their participation on one or the other, thus creating problems in both timing and focus of public response. Potential problems of this type should be minimized by following the process recommendations developed in Figure 4-2, taking care that the survey report and EIS are developed concurrently and that they are treated as companion documents in order to eliminate duplication, while satisfying the requirements for both reports. Such an approach will likewise facilitate the public involvement in both aspects of the planning process.

Public Participation in River Basin Water Quality Management Planning

The preservation and enhancement of water quality is the responsibility of federal, state and local agencies. Reflecting the concern for water pollution abatement, the Federal Water Pollution Control Act Amendments of 1972 directs appropriate state agencies to develop a continuing planning process for water quality management. The "basin plan" or "water quality management plan" is a key feature in coordinating water quality program decisions and achieving basin-wide water management.

The First Annual Report of the Water Resources Council (1973) on Level B planning describes the close interrelationship between the planning prescribed under Section 208 of the Federal Water Pollution Control Act Amendments of 1972 and Level B planning:

> The Act provides that each planning agency receiving a grant under Section 102(c) shall develop a comprehensive pollution control plan for the basin or portion thereof which is developed in cooperation with and is consistent with comprehensive plans prepared by the Water Resources Council, any areawide waste treatment management plans developed pursuant to Section 208 of the Act, and any State plan developed pursuant to Section 303(e) of the Act. The Act also encourages and makes provisions for facilitating the development and implementation of areawide waste treatment management (AWTM) plans. Such plans are to be certified annually by the Governor or his designee as being consistent with applicable basin plans.
>
> The continuing AWTM planning prescribed by Section 208 must necessarily be evolved in conjunction with Level B planning, since both types of planning involve many of the same functional considerations and analyses of alternatives. The physical waste treatment systems resulting from AWTM plans can have a pervasive influence on many public and private investment decisions in such wide ranging areas as the location of residential, commercial, and industrial developments; highway and other

transportation requirements; the location of schools, medical, and energy-producing facilities; police, fire, sanitation, and other public facilties; and the availability and quality of recreational facilities, parks, fish and wildlife habitat, green belt, open space, wilderness and other amenities.

These decisions in turn can either advance or conflict with public objectives relating to optimum land use; more equitable population and income distribution; urban renewal; rural area development; environmental restoration and enhancement; and the broad utilization of our natural resources to provide the most good for the most people in the long run. Consequently, it is imperative, particularly in those areas having substantial water quality problems as a result of existing urban-industrial concentrations, that AWTM plans be developed with full consideration of those functions that Level B studies can and do address on both an existing and projected basis. These include: water supplies for diverse uses; water quality management planning; flood control and flood plain management; navigation and riverfront development; coastal and shoreline management; land classifications and soil capabilities; topography and drainage patterns; erosion and sedimentation; socio-economic factors; recreational, fish and wildlife, and other amenities; land uses; the status of renewable and nonrenewable natural resources; conservation needs; and total environmental conditions of the area.

In passing the Water Pollution Control Act Amendments of 1972, Congress specifically provided mechanisms by which interested citizens could be involved in the Act's major programs. The guidelines issued pursuant to Section 101(e) of the Act to insure that public involvement is provided for by federal, state, and local authorities include:

(a) Public meetings, information, and educational programs on water quality.

(b) Transmittal to citizens of timely and accurate information on significant agency decisions.

(c) Publication of a summary report on public participation in connection with promulgation of regulations, standards, and effluent limitations; the submission of planning recommendations.

(d) Required public hearing at specific junctures in the administration of the total program. In many instances, public hearings are made mandatory prior to important agency decision-making.

While the four points establish something of a minimum program for public involvement, the regulations strongly emphasize the need for public participation in the early stages of planning and continuously through the planning process. They state that:

> "Conferring with the public after an agency decision has been made will not meet the requirements" for obtaining citizens' views.

Since the basin water quality management plan is closely tied to Level B river basin water resource planning mechanism for all water quality programs, citizen participation in these studies will be subject to the above guidelines.

Purpose of local participation in planning. Citizen participation in the preparation of a water quality management plan in river basin planning would serve the following specific purposes:

1. To coordinate water resource planning activities and to solicit assistance in this planning effort from all local officials, public interest groups, and citizens.
2. To inform, and involve to the extent possible, citizens and elected officials in the basin in water quality water resource management planning in order to obtain their views.
3. To provide local decision-makers with management plans and information which will allow them to make decisions in the context of their impact on the water quantity,

quality, and environment of the basin.

4. To establish a common information and planning base for elected officials in the basin in order to provide cooperation and coordination in water resource management decisions.

5. To develop, at the state and local level in the basin, the capability to implement water resource plans.

6. To implement the preferred program for water resources and water quality management, recognizing regional priorities within the basin.

The public contribution to planning. "A Citizen's Guide to Clean Water," a booklet published by the Environmental Protection Agency, states that the river basin water quality management plan "offers perhaps the most significant avenues for substantive public input into governmental decision-making at the ground level." Figure 4-3 provides an overview of the major tasks in river basin water quality planning as a basis for relating these to elements of river basin water resource plans. The figure also identifies the relation of public participation to study tasks. Some of the important planning areas where the contributions of local government officials, civic leaders, and private citizens are needed are:

1. Goals and objectives. Setting community goals and objectives for desired use of water and the water and related land environment--streams, lakes, reservoirs, marshes, and so on. This will have important bearing on the water quality levels that need to be maintained in

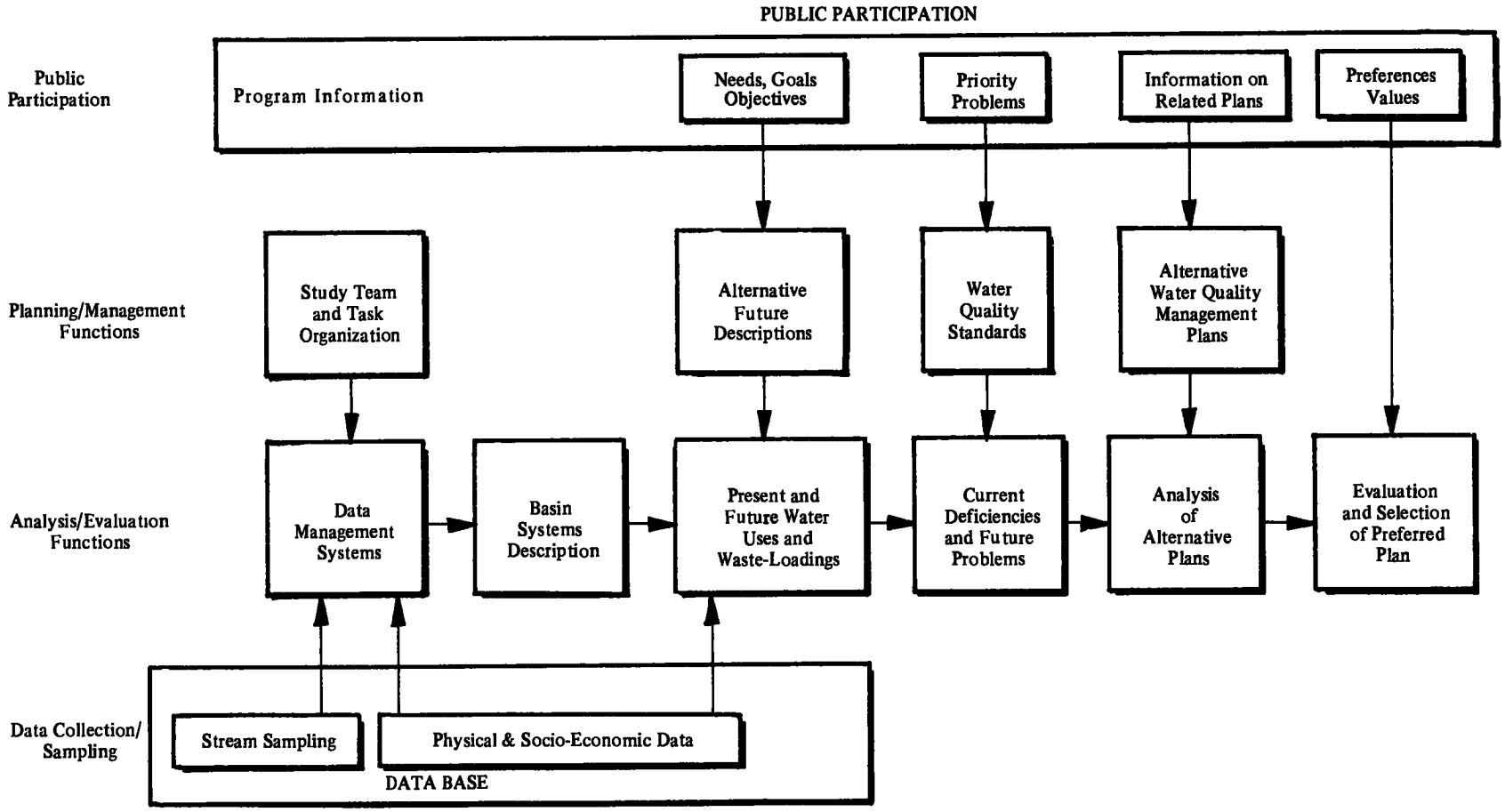


Figure 4-3. Relationship of major study tasks in developing the water quality component of a river basin water resource.

order to protect these water uses and environments, and the health, safety, and welfare of the citizens that utilize them.

2. Alternative futures. Assisting in describing alternative futures for the basin, including population size and distribution, levels of economic and industrial activity, patterns of land use, life styles, recreation leisure time, and other social and economic factors. The factors described in various future conditions will affect the future water requirements and pollution loadings on streams in the basin, and thus the kinds of basin management plans that will need to be implemented 5, 10, and 20 years in the future.

3. Priority problems. As an effective management tool, a plan outlines the sequence or order in which problems should be dealt with and solved. Trying to solve all problems simultaneously spreads money and trained technical personnel too thin to be effective. Therefore, priority problems -- those that are most seriously affecting citizens of communities -- must be identified and then treated in a logical and efficient manner. The public's input and viewpoint as to the critical water quality problem areas are essential to making these planning determinations.

4. Information on related plans. Water resource and quality management must be responsive to and compatible with other ongoing planning in the basin. This kind of coordination can be assured through local officials' and citizens' active participation in providing information on related community land use, zoning and master plans, transportation

plans, potential industrial growth, and recreation developments.

5. Preferences in selecting plans. A number of alternative approaches to basin water quantity and quality management will be considered in the course of the planning study. The adoption of the plan which will best serve the basin needs in meeting stream quality standards and effluent discharge limitations requires an expression of public values and preferences. Public understanding of the alternatives and open discussion of their merits and demerits will aid in this process.

An example communications strategy for river basin water quality planning. Agencies with basin planning responsibilities are required by federal regulation, implementing the Water Pollution Control Act, to "encourage public participation at the earliest stages of the planning process." In order to assure that public participation is encouraged throughout the planning process and to insure that pertinent and timely information is provided to interested citizens, a number of means for planner-agency-citizen interaction could be employed during a study. Public involvement in the planning process must consist of two-way communication and not just a public information effort. The following briefly summarize the communications strategy developed for the Utah State Division of Health for three river basin water resource, water quality management studies:

Citizens committee. A citizens committee would be established to promote and insure that a high degree of continuous public participation

will be maintained throughout the basin study. In particular, the committee is charged with three major functions:

- To provide fact supported suggestions or comments on various problems and issues that arise in the course of the planning study.

- To act as a sounding board to reflect community and sub-regional preferences in regard to problems, issues, and planning alternatives.

- To act as a catalyst for obtaining broad-based participation of various public interests in segments of the basin through assistance in organizing public meetings, workshops, and forums, and advising on the needs and content of public information programs.

Technical coordinating committee. This committee, made up of elected officials and selected members of their staffs (e.g., planners, health officers, and engineers), and representatives from appropriate federal and state agencies, would represent local and regional government agencies in the basin. The function of the committee would be coordination of local plans with basin planning and organization of task forces to deal with specific technical problems. The committee would be advisory to the river basin planning agency. Following are some of the other agencies which should be considered as participants:

- County commissions and planners

- Representatives of municipalities in the counties

- Representatives of government agencies

  Federal: Soil Conservation Service, Forest Service, Geological Survey, Bureau of Reclamation, Bureau of Land Management, and Corps of Engineers, Environmental Protection Agency, etc.

State: State Engineer, Parks and Recreation, and Wildlife Resources, Health, etc.

Public meetings, forums, and workshops. Public meetings, forums, seminars, and workshops can serve as a highly effective means of achieving good two-way communication and exchange of information. In contrast to public hearings, these types of meetings are characterized by their informal format and opportunity for open discussion. These informational and work-oriented meetings can be organized along the following lines depending on the purpose:

- Information seminars: Quality citizen participation in planning depends on getting and understanding information. Informational meetings and seminars provide a simple and direct way of keeping interested citizens up-to-date on the study and in providing information and data on specific technical questions, problems, and issues.

- Community forums: Organized meetings of interested organizations such as service clubs, conservation groups, farmers' organizations, water user associations, Chambers of Commerce, and others provide an excellent forum for discussion of various aspects of water resource management plan that are appropriate.

- Workshops: Workshops of interested citizens, representatives of public interest groups, and local officials are characterized by their orientation toward problem solving. Workshops may be organized for open participation of any interested citizen or may focus on particular technical issues and problem areas of concern to only specialized groups or geographical areas. The structure of the workshops will be task directed, concentrating on the general content areas like those listed in the section on "Public Contributions to Planning."

Public information programs. Public information programs are comprised of materials to be disseminated by the media (newspapers, radio, and TV) and materials directly for use of individuals and groups.

- Media information consists of newspaper releases on the progress and findings of the study, as well as spots on radio and local TV outlets. These sources will also be used to announce public meetings of various types.

- Special materials for providing information directly to interested citizens will also be produced. These will include such items as summary fact sheets, informational pamphlets, brochures, and workbooks for obtaining reactions to problems and management plans, and direct correspondence on letters and inquiries.

Public hearing. A public hearing is required before the basin plan is approved. The public hearing is a formal meeting for documenting the comments and views of citizens on the proposed basin management plan. A record or transcript of the hearing is kept which includes both oral and written statements. The hearing on the planning recommendations will be conducted at the conclusion of the study prior to approval of the final plan.

Public Participation in Planning with Varying Geographic and Demographic Settings

Public Participation in Level B River Basin Planning

According to the First Annual Report of the Water Resources Council (1973) on Level B planning:

> A regional or river basin plan (Level B) is a preliminary or reconnaissance-level water and related land plan for a selected area. These are prepared to resolve complex long-range problems identified by less detailed studies such as the framework studies and the national assessment. They may vary widely in scope and detail, but will focus on middle term (15 to 25 years) needs and desires and involve Federal, State and local interests in plan development. They also identify and recommend action plans and programs to be pursued by individual Federal, State and local entities.

A significant impetus has been given to Level B planning by the Federal Water Pollution Control Act Amendments of 1972 in relating it to water quality plans. Section 209 of the Act directs that Level B plans be prepared for all regions or river basins by 1980. As the Water Resources Council (1973) notes:

> Clearly in Section 209 of P. L. 92-500, Congress recognized the need to integrate various functional planning efforts into a comprehensive program that would insure that water and land resources are planned and managed effectively. Congress also desired to emphasize the value of securing public involvement in environmental quality planning as well as in the planning of the management of a region's total natural resources. Section 209 does not authorize a new planning program but accelerates an ongoing, coordinated, comprehensive, Federal-State-local, Level B planning program under the direction of the Water Resources Council (a 12-member Federal interagency entity).

The characteristic setting for Level B planning of river basins is likely to be one of geographic and demographic diversity. The relatively large geographic areas will typically have a number of population centers, as well as both rural agricultural based activities and industry and commerce. With such juxtapositions of activity, setting and variations in lifestyles, developing an effective communications program which can respond to the many geographic, economic, social and political subunits becomes a difficult challenge. Time and distance represent further problems in covering the basin that must be overcome in the communication effort.

Against this general background for the Level B planning study, two general points in developing the communication program seem appropriate:

1. Programs should be organized and carried out on a subregional basis to adequately treat geographic, economic and social differences, and insure good local input.

2. It will likely fall to the planner to represent the broad regional interest in integrating local desires into a comprehensive plan, and to set a participatory mechanism through which incompatibilities and conflicts among subregional interests can be resolved.

The following represents an example structure for a communications plan for a river basin. The example is not meant to represent an ideal program nor is it put forth as a model to follow. Rather it should be a point of departure or basis for discussion and critique in developing a program which recognizes the unique aspects of the particular basin under study.

The accompanying activity diagram details the public participation activities for each of three groups for public involvement during five planning phases of the basin study. Participant groups are lumped as follows:

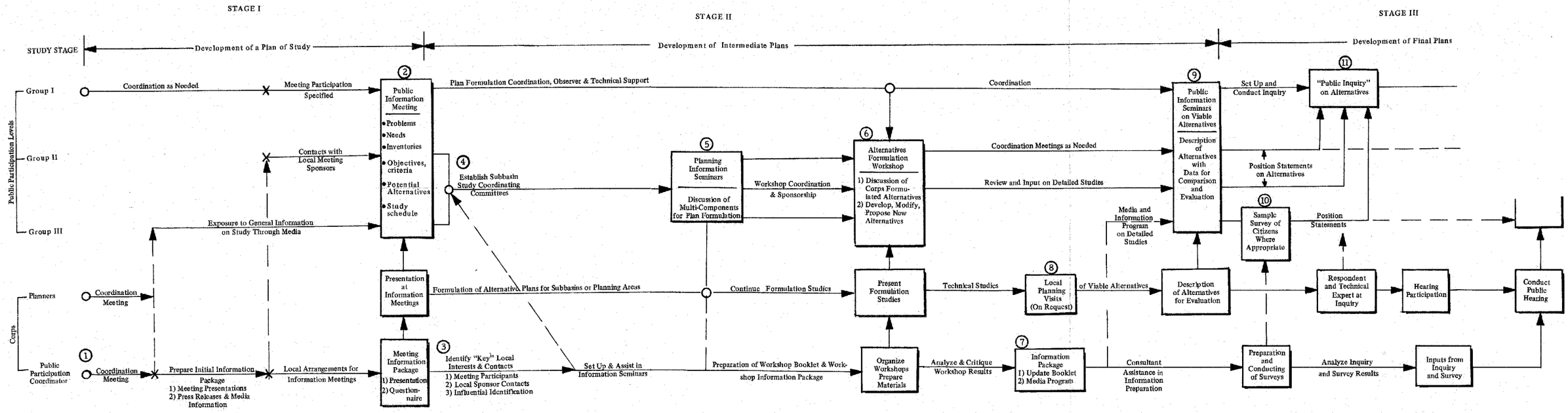
Group I: Other Federal and State agencies

Group II: Local government officials, regional planning agencies and councils of government, leaders of public service organizations, clubs and special interest groups, and other identified "influentials"

Group III: The general public as individual citizens

Key elements or activities in the public participation plan are identified by a number in order to facilitate the following summary description of these activities.

FIGURE 4-4. BASIN STUDY —— —— PUBLIC PARTICIPATION PLAN



1. Public involvement specialist. The task of the "public involvement specialist" as a member of the planning team, can be described in general as effectively coordinating, assembling and preparing information and data, and opening access to the three participant groups. The specialists work should be, in part, to provide a link between the planning team and Public Affairs Office. He should also maintain contact with any outside organizations contracted to do other parts of the study. This is essential in order to be fully familiar with the study progress, and to have full ability to prepare informational brochures, packets, progress reports, and summaries of data and information. A key responsibility of the specialist should be the preparation of a non-technical summary of all study findings and reports. The summary can be included with the main report and also issued as a separate document for Group I and II public participation activities and to Group III upon request.

2. Public information meeting. Public information sessions are to be conducted according to the description in Chapter 3.

3. Identification of "Key" local contacts. An identification of "key" local contacts should be undertaken. This could be managed through observations and contacts made in setting up the public information meetings, through identification of attendees at the meetings, and as part of a questionnaire to be filled out by meeting attendees. The purpose would be to develop a master list (as well as an updated mailing list) of all individuals or leaders of groups who are in a position to influence the outcome and acceptance of the planning effort. The identification should

indicate the basis for inclusion on the list, the group represented and appropriate ways to maintain contact and coordination.

4. Sub-basin coordinating committees. A valuable asset in maintaining continuity in local contact throughout the study would be some type of local committee for sub-basins or regions within the study area. These committees may be precipitated as part of the accomplishment of the public information meeting (2), and then strengthened through drawing in those identified as "key" locals as discussed in (3). The local committees would then be in a position to act as a focal point for organizing future planning meetings and also as a contact for obtaining local input and participation in the formulation and development of viable alternatives.

5. Planning information seminars. In order to encourage the effective participation of Groups II and III in the study, one or more informational seminars could be held at the District Office and/or other appropriate locations. The agency would discuss its findings to date and an opportunity for Group II and III participants to make an input would be provided. One advantage of the District Office as a meeting place is that many of those attending may not have visited a Corps Office, and thus will get a first-hand look at the organization and operation.

6. Alternatives formulation workshop. As a means of getting public input into the plan formulation efforts, a series of formulation workshops would be held for Group II and III participants. The purpose is to fully familiarize participants with the components of alternative

plans in order for them to respond and contribute to synthesizing several viable alternative plans. Again the planners must take an active role in presenting and discussing study findings.

7. Information package. Materials developed by the "public participation coordinator" should be disseminated through Corps PAO channels and in cooperation with Group I study cooperators and co-sponsors. Mass media should especially be used to reach Group III, and individual information packages, brochures and mailings to reach Group II.

8. Local planning visits. Follow-up to the information package can be accomplished through local planning visits as requested. The information package should contain instructions on who to contact and how to arrange the visits.

9. Public information seminars. As a prelude to deriving public input in the evaluation of viable alternatives, it is important to provide an adequate understanding of the final set of planning proposals so that comment and feedback can be made on the basis of accurate information and data. The mechanism for accomplishing this would be a series of information seminars where the set of proposals can be discussed openly and in the context of no commitment to any final decision. Sponsorship of the seminars could well be handled by the sub-basin coordinating committees. It should be noted that the "public inquiry" (11) is provided as the opportunity to make formal position statements for or against alternatives.

10. Sample survey of citizens. In order to derive a component of citizen input at this phase that may not have been tapped earlier in the study, a random sample survey of citizens could be contracted. The objective of the survey would be to identify the important values held by the citizens in the sub-basins and how these values intersect with the components of the viable alternatives. This information will then be available to assess important social, economic and environmental values at the public inquiry.

11. Public inquiry. Often a state agency or other equivalent regional authority will act as the decision making body for approval of the final plans. If so, such an agency would be the appropriate authority to conduct a public inquiry. The public inquiry will insure that final input information form Levels II and III is achieved. The inquiry should be open from 2 to 3 days. The format should allow individuals and representatives of groups to present testimony, information and data at any convenient time during the period for the benefit of the planners and decision-makers. This procedure avoids the formality and structure of a hearing and encourages the free and open dialogue necessary as planning nears completion.

Public Participation in Urban Studies

Another area of Corps planning, which represents still different public participation setting, is that of urban wastewater management studies.

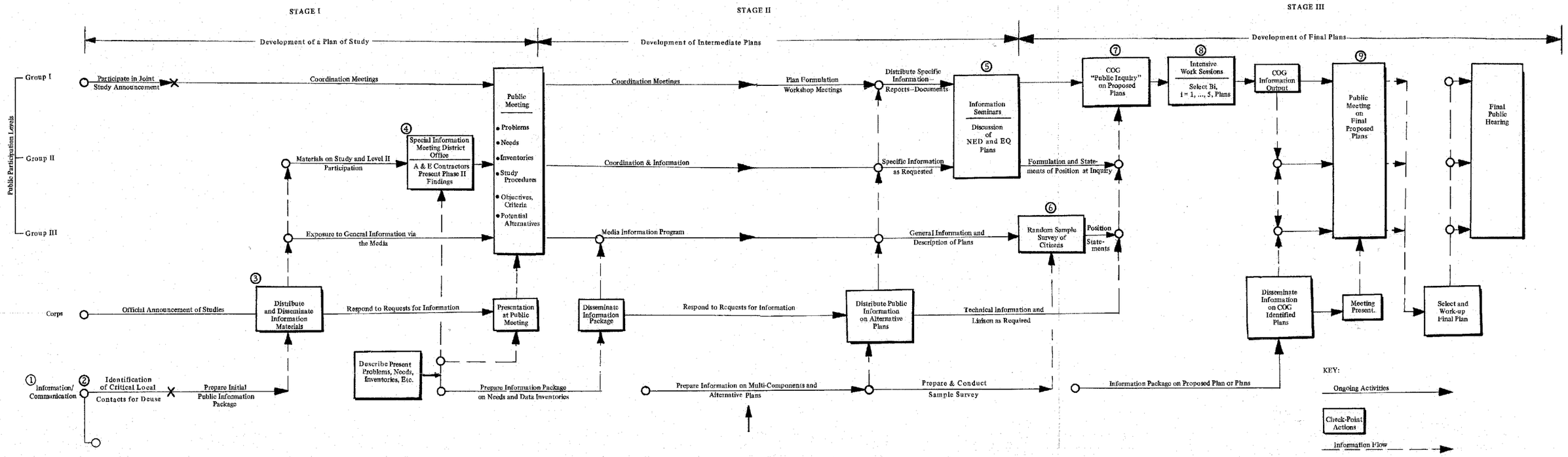
Here the distinguishing factor in the characteristic setting is found in the relatively high population density, i.e., large populations concentrated in a relatively small geographic area. In addition there is likely to be a bewildering number of political jurisdictions and special districts, as well as a broad range of social and economic groups, communities and activities. The direct participation of a large majority of the citizens in large urban areas is difficult to imagine, let alone to expect to accomplish if only because huge imbalance between numbers of citizens and the planning team.

In this context, it seems appropriate to structure the communication program along the lines of the following general concepts:

1. The direct communications program should be aimed at involving community and governmental leaders, and representatives of citizens groups as a link between planners and the general public as constituent groups.
2. Mass communications should be developed to provide information to the general public and point out the channels for feedback and participation for those who wish to be directly involved.

The following presents an example communications program for an urban study area. Again, it is also intended only as an illustration of how communication methods might be organized for such a study. Naturally, each such study will have its own unique setting which must be considered. The accompanying activity diagram details the public

FIGURE 4-5. URBAN STUDY - PUBLIC PARTICIPATION PLAN



participation activities for each of the three groups for involvement during the three general planning stages of an urban water management study. Some of the key elements of activities in the public participation plan are identified by a number in order to facilitate the summary description of the activities which follows:

1. Public involvement specialists: Normally, in urban studies, because of the large populations affected and the complexity of problem and institutions, a public involvement specialist will be a member of the planning team. The specialist should work in close cooperation with the District PAO. The specialist would maintain close contact with all branches working on parts of the study in order to be fully familiar with the study progress, and have full ability to prepare informational brochures, packets, progress reports, summaries of data and information. A key responsibility of the communications specialist will be the preparation of a non-technical summary of all project reports which are to be included with the main report. This can be issued as a separate document for Group I and II public participation activities and to Group III upon request.

2. Identification of key local contacts. An identification of key local contacts must be undertaken in order to identify community leaders for the direct communication elements of the program. This could be managed by a short duration effort, preferably undertaken by individuals familiar with the urban area institutions, governmental jurisdictions, as well as community and social groups. The purpose would be to

develop a master list of all individuals or leaders of influential groups who are in a position to significantly influence the outcome and acceptance of the planning effort. These would be people who operate on a level where contact should be maintained through the District Engineer or his delegated representative. The identification should indicate the basis for inclusion on the list, the individuals' means of access to water planning decisions, and appropriate ways to maintain contacts and coordination.

3. Distribute information materials. Materials developed by the communications specialist should be disseminated through Corps PAO channels and in cooperation with Group I study cooperators and cosponsors. Mass media should especially be used to reach Group III, and individual information packages, brochures and mailings to reach Group II.

4. Special information meeting. In order to more fully encourage the effective participation of Group II in the study, it is suggested that one or more informational conferences be held at the District Office. The study team will present its findings, and an opportunity for knowledgeable Group II participants to make an input will be provided.

5. Information seminars on plans. As a prelude to the development of one or more "detail" plans for analysis, it is recommended that a series of information seminars be held for Group I and II participants. The purpose will be to fully familiarize these people with the basic components of plans, those emphasizing economic objectives, and those

environmental objectives, as outlined by the Water Resources Council's "Principles and Standards." These components serve as a basis for response in synthesizing several plans representing various "mixes" of economic and environmental objectives. A detailed discussion of the formulation of NED and EQ plans is contained in Corps of Engineers (1975). The planning team will again take an active role in presenting and discussing study findings.

6. Sample survey of citizens. In order to derive a component of citizen input at this phase, in the most accurate and useable form possible, a random sample survey of citizens could be conducted. The objective of the survey would be to identify the important values held by the citizens in the study area and how these values intersect with the components of the two plans. This information will then be available to assess important social, economic and environmental values at the next key checkpoint.

7. COG public inquiry. The regional Council of Governments (COG) or some agency of equivalent authority should act as the decision-making body for the selection of the one or more final plans. To insure that all input information from Group II and III is achieved, a public inquiry is recommended. The inquiry should be open from 2 to 3 days where the format allows individuals and group representatives to present testimony, information and data at any convenient time during the period for the benefit of the COG planning decision-makers. This procedure avoids the formality and structure of a hearing and encourages a free and open interchange necessary for this point in the planning.

8. Intensive work sessions. With all of the studies and information now before them a COG planning work group should move into intensive work sessions to hammer out the final plan(s). The sessions would be planned for a conference facility with accommodations for a conference of 4 or 5 days duration. The approach would be along the line of the "total immersion" or charette concept, in which the group works together without outside distractions until the final plans have been agreed upon.

9. Public meeting and final plans. In keeping with the guidelines on public meetings in the plan formulation, a general public meeting sponsored jointly by COG and the Corps would be held on the plans selected for final study. Based on any final reactions at the public meeting, modifications could be made before the final plan is recommended.

The Public Role in Water Resources Planning -- A Summary

While some may debate whether water resources planning and management lies wholly within the realm of technical experts, or if the public has a legitimate role to play, the fact is that concerns of public groups and private citizens have already generated a considerable degree of "public" involvement in planning issues. Referring to citizen participation, Russel Train (1973), Chairman of the Council on Environmental Quality, stated that "Government at all levels must dramatically change

its attitudes about public participation in environmental decision-making before we can have truly effective management systems. We must really level with the public. " . . . Public participation in decisons must be an integral part of good public management, . . ." The challenge for water resources planners is to design and implement programs through which citizens can become involved in ways that will contribute most constructively to formulating proposed plans, in assessing their economic, environmental and social impacts, and in selecting a preferred course of action.

REFERENCES

Aggerholm, D. A. 1973. Evaluation of Seattle District Fishbowl Planning Program, Draft Report. U. S. Army Engineer Institute for Water Resources. Ft. Belvoir, Va.

Army Corps of Engineers. 1971. Public Participation in Water Resources Planning, EC 1165-2-100. Office Chief of Engineers, May 28, 1971.

Army Corps of Engineers. 1974. Urban Studies Program. Federal Register, Vol. 39, No. 130, Part III. Friday, July 5, 1974.

Army Corps of Engineers. 1975. Planning Process: Multi-Objective Planning Framework. ER 1105-2-200. Office Chief of Engineers. February 1975 (Draft).

Berlo, David K. 1960. The Process of Communications. Holt, Reinhart and Winston, New York.

Bishop, A. Bruce. 1970. Public Participation in Water Resources Planning. IWR Report 70-7. Corps of Engineers Institute for Water Resources. Ft. Belvoir, Va. December.

Bohlen, J. M. and George M. Beal. 1957. The Diffusion Process. Special Report No. 18, Supplement to Regional Extension Publication No. 1, How Farm People Accept New Ideas. Agricultural Extension Service, Iowa State College, March. p. 3.

Borton, T. E., Warner, K. P. and J. W. Wenrich. 1970. The Susquehanna Communication - Participation Study. IWR Report 70-6. U. S. Army Engineer Institute for Water Resources, Ft. Belvoir, Va.

Chester, G., G. R. Garrison, and E. E. Willis. 1963. Television and Radio. Appleton-Century-Crofts. New York, N. Y. 3rd Edition.

Council on Environmental Quality. 1971. Statements on Proposed Federal Actions Affecting the Environment. Paragraph 10(e). Federal Register Vol. 36, No. 79, pp. 7726. April 23, 1971.

Council on Environmental Quality. 1973. Preparation of Environmental Impact Statements--Guidelines. Federal Register Vol. 38, No. 147 Part II. August 1, 1973.

Environmental Protection Agency. 1973. Preparation of Environmental Impact Statements--Interim Regulation. Paragraph 6.95. Federal Register Vol. 38, No. 11, pp 1708-1712. January 17, 1973.

Environmental Protection Agency. 1974. Water Quality Management Basin Plans. Federal Register Vol. 39, No. 107, Part II. Monday, June 3, 1974.

Federal Highway Administration. 1972. Process Guidelines (Economic, Social, and Environmental Effects of Highway Projects). Policy and Procedure Memorandum (PPM) 90-4, Paragraph 11. September 21, 1972.

Forest Service. 1974. Guide to Public Involvement in Decision-Making. U.S. Department of Agriculture, Forest Service. April 1974.

Kahle, R. and R. L. Lee. 1974. A Q-Methodological Study of Attitudes Toward Water Resources and Implications for Using Mass Media in Dissemination of Water Research Results. Water Resources Research Center, University of Missouri, Columbia, Mo.

Lasswell, Harold D. 1948. The Structure and Function of Communication in Society, in The Communication of Ideas, ed. by Lyman Gryson. New York: Institute for Religious and Social Studies, Jewish Theological Seminary of America. p. 37.

Ortolano, Leonard. 1974. Water Resources Decision-Making on the Basis of the Public Interest. Review Draft. U.S. Army Engineer Institute for Water Resources. Kingman Building, Fort Belvoir, Va. 22060.

Peterson, J., J. W. Jensen, and W. L. Rivers. 1965. The Mass Media and Modern Society. Holt, Rinehart, and Winston, Inc., New York, N. Y.

Ross, P. J., Spencer, B. G., and J. H. Peterson, Jr. 1974. Public Participation in Water Resources Planning and Decision-Making Through Information-Education Programs: A State-of-the-Art Study. Water Resources Research Institute. Mississippi State University. Mississippi State, Ms.

Schramm, Wilbur. 1971. The Nature of Communication Between Humans, in The Process and Effects of Mass Communications, ed. by Wilbur Schramm and D. F. Roberts. University of Illinois Press.

Shannon, C. E. and W. Weaver. 1941. The Mathematical Theory of Communication. University of Illinois Press, Urbana, Ill.

Train, Russell E. 1973. Management for the Future, Keynote Remarks. Final Conference Report, National Conference on Managing the Environment. Environmental Protection Agency, Washington, D. C. May 1973.

Water Resources Council. 1973. First Annual Report to the Congress of the United States on Level B Planning. Washington, D. C.

Water Resources Council. 1973b. Principles and Standards for Planning Water and Related Land Resources. Federal Register, Vol. 38, No. 174, Part III. September 10.

Willeke, Gene E. 1974. Identification of Publics in Water Resources Planning. ERC-1774 Department of City Planning and Environmental Resources Center, Georgia Institute of Technology, Atlanta.

Willeke, Gene E. 1974b. Theory and Practice of Public Participation in Planning.