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**FINAL REPORT  
FOR THE  
SALT-GILA RIVER  
WATERCOURSE  
MASTER PLAN  
SCOPING PROJECT  
(TASK 8.0)**

Prepared for  
Flood Control District of  
Maricopa County  
2801 West Durango  
Phoenix, Arizona 85009  
January 31, 1994



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## EXECUTIVE SUMMARY

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This Final Master Plan Scope Report culminates 14 months of effort by the Salt-Gila River Master Planning Participants (consisting of the Flood Control District of Maricopa County, along with representatives of 21 Maricopa County land-use jurisdictions, Native American Communities, resource management agencies, the interested public) and Woodward-Clyde Consultants (the Scoping Consultant) to identify a preferred approach to a Salt-Gila Watercourse Master Plan and to develop a scope of work for that Master Plan. The proposed Master Plan, which would be funded and developed over a period of five years, is intended to achieve three major objectives:

- comprehensive floodplain management and flood control;
- coordinated land use planning and streamlining of the permit process; and
- enhancement of the environment along the 95-mile reach of the Salt and Gila Rivers from Granite Reef Dam to Painted Rock Reservoir.

Following a year-long scope development process that included identification of existing data available to support master plan development, identification of technical, institutional, social, environmental, and economic issues and concerns, and solicitation and consideration of public input, the Master Plan Participants refined and expanded the scope of the Master Plan. The Management Committee also reached consensus on a Master Plan Mission Statement and a series of Goals and Objectives for the planning process. These provided guidance for the Scoping Consultant to develop five different master plan options, each of them ranging in degree of completeness, schedule, and cost, but all addressing at some level the issues of importance identified by the Master Plan Participants and the interested public.

The five Master Plan options were presented at a September 1993 meeting of the Management and Executive Committees, where the Executive Committee accepted the recommendation of the Management Committee that a Moderate Master Plan was the preferred approach. At this time the Executive Committee also supported a request by the Gila Bend-Dendora Valley Water Users that the Master Plan Study Area be extended from the original 72-mile reach between Granite Reef Dam and Gillespie Dam, to a 95-mile reach extending from Granite Reef Dam to Painted Rock Reservoir. The Scoping Consultant was directed to proceed with preparing a detailed scope of work, estimated cost, and schedule for the Moderate Master Plan.

The approach used to scope the work effort, cost, and schedule for the Moderate Master Plan was designed to provide a detailed task-based, but phased, iterative planning process including regular progress assessment and evaluation opportunities. This approach also allows the Master Plan Participants to make relatively modest front-end investments of funds on an incremental basis. Finally, the Moderate Master Plan process was designed so that it can be organized, funded, developed, approved, and implemented in less than a five-year timeframe and at an estimated cost of approximately \$7 million.

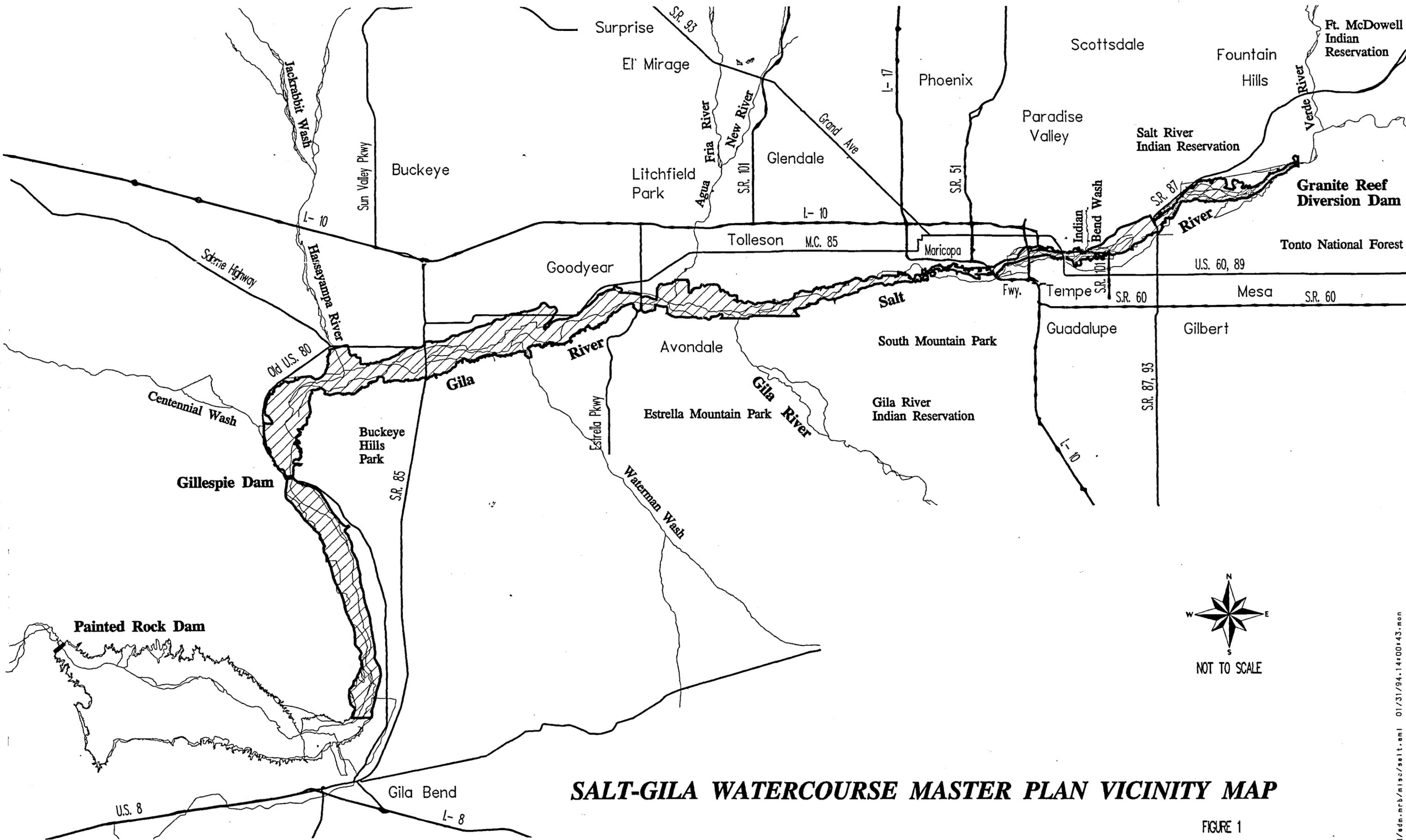
### 1.1 BACKGROUND

Since 1988, local governments have expressed a strong interest in providing a mechanism for close inter-jurisdiction and inter-agency coordination of planning for development and environmental protection along those portions of the Salt and Gila Rivers within Maricopa County. Under the leadership of the Flood Control District of Maricopa County, committees representing 12 land-use jurisdictions and a number of resource management agencies were formed to guide a planning effort which would ensure management of the Salt-Gila Rivers as an integral watercourse. See Appendix A for a chronologic description of these earlier efforts and planning coordination.

The Flood Control District contracted with Woodward-Clyde Consultants (Scoping Consultant) on November 16, 1992 for the development of the scope of work for a preferred approach to preparing a Watercourse Master Plan (which is referred to in this report as the Scoping Project). For purposes of the Scoping Project, the Master Plan Study Area was initially defined as the 100-year floodplain, squared to the nearest half section along the approximate 72-mile reach of the Salt-Gila River from Granite Reef Dam to Gillespie Dam. Based on direction from the Executive Committee, the Study Area was extended to Painted Rock Reservoir, an additional 23 miles, making the final Study Area a 95-mile reach of the rivers. (Figure 1).

Although the Flood Control District was the contracting agency for the Scoping Project, the previously established Watercourse Master Plan Executive Committee and Management Committee were responsible for providing policy guidance and assisting with formulation of goals and objectives for the Master Plan. The Executive Committee is made up of elected or appointed officials who have decision-making authority within their respective jurisdictions, Native American Communities, and/or agencies and is charged with policy guidance and final decision-making responsibility for the Watercourse Master Plan. The Management Committee is made up of staff-level representatives of 21 different municipalities, agencies, Native American Communities, jurisdictions, and other user groups. The Management Committee is the working arm of the watercourse master planning entities. Members met ten times during the Scoping Project to review the work in progress and to provide input to the process.

The identification of alternative approaches for preparing a Master Plan and the selection of a preferred approach was accomplished over a 14-month period during which the Flood Control District, the Master Plan Management Committee and the Master Plan Executive Committees worked together to develop a Mission Statement for the Master Plan and to identify and refine the master planning goals and objectives of the various jurisdictions, agencies, and the Maricopa County public. The following Mission Statement and Master Plan Goals and Objectives were produced by consensus of the involved parties and were approved by both the Management Committee and Executive Committee at their meeting on September 14, 1993.



**SALT-GILA WATERCOURSE MASTER PLAN VICINITY MAP**

FIGURE 1

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### **Master Plan Mission Statement:**

"To develop a watercourse Master Plan for the Salt-Gila River that provides jurisdictions and entities along the watercourse with tools to assess and manage the impacts of future development on the existing and planned natural and man-made environments."

### **Master Plan Goals and Objectives:**

- To develop a hydraulic master plan that evaluates and manages the risks of loss of life and damages to property within the 100-year floodplain.
- To identify existing conditions and assess future impacts of development on the natural and man-made environments.
- To strive to develop consensus among the jurisdictions and entities on river management.
- To maintain, protect, and enhance environmental quality and integrity.
- To streamline and coordinate regulatory policies and procedures.
- To produce a master plan that may be adopted by the Flood Control District Board of Directors and other jurisdictions, and to adopt uniform plan-based land use ordinances and/or regulations for enforcement.

## **1.2 SELECTION OF A PREFERRED APPROACH TO MASTER PLANNING**

The Master Plan Scoping Project began at a Management Committee meeting in November of 1992 with a presentation by the Scoping Consultants of the scoping concept and approach. Early in the schedule, a Public Involvement Program was developed, with a public information plan and implementation schedule based on the major milestones of the technical work tasks. The Public Involvement Program included:

- further identification of interested parties;
- publication of news articles to raise public awareness of the Project;
- a series of Fact Sheets; and
- public meetings.

Another important early task was to identify existing sources of technical, institutional, and environmental information on the Master Plan Area. Evaluation of the quality, volume, and currentness of this data would be used to assist in determining whether new studies and additional information gathering would have to be completed before the Master Plan could be prepared.

A Survey/Census Form was designed and used to record, categorize, and evaluate existing data and information pertinent to planning considerations in the Project study area. Members of the Management Committee were asked to list relevant documents and comment on the completeness, relevancy, and currentness of the work. This information was used to develop an Annotated Bibliography which not only lists available, relevant sources of information, but is an important tool for identification of data gaps. In addition, a number of resource

management agencies and other potential information sources for Salt-Gila River issues were contacted by Woodward-Clyde staff and more data sources were documented.

Identification of those institutional and regulatory issues that presented potential opportunities/constraints to Master Plan development was undertaken following completion of the Annotated Bibliography. Through Management Committee meetings and during interviews with the appropriate agency contacts, technical issues which could present potential opportunities and constraints to the Master Plan development were also discussed. The preferred content of the Master Plan was identified through discussions with the Management Committee and from feedback provided at the public meetings. The specific areas of interest and concern identified were:

- implementation of an enforceable Master Plan,
- flood control/floodplain management,
- streamlined permitting process (NEPA, Section 404, CWA),
- identification of cumulative impacts,
- water quality/water resources management,
- reclamation of aggregate mining facilities,
- cleanup of landfills,
- habitat management,
- environmental enhancement,
- economic benefits, and
- recreational uses.

Using findings of early tasks (Annotated Bibliography and Identification of Institutional, Regulatory, Technical, and Social Issues), as well as the guidance provided by the Management Committee in the Master Plan Mission Statement and goals and objectives, a report was prepared which presented five master plan options, each of them varying in degree of completeness and breadth of coverage, as well as potential costs. The range of options were designated: Comprehensive, Extensive, Moderate, and Limited Master Plan, and No Project. The report also contained a summary of master plan option features, estimated costs, and schedule for development and implementation.

The Master Plan options (see Figure 2 for a comparative summary) were presented to the Management Committee on August 10, 1993. At this meeting, the Management Committee agreed unanimously to recommend the Moderate Master Plan to the Executive Committee. A meeting of the Executive Committee was held on September 14, 1993, at which time the Executive Committee accepted the recommendation of the Management Committee that a Moderate Master Plan was the preferred approach. The Scoping Consultant was directed to proceed with preparing a detailed report on a proposed scope of work, estimated cost, and schedule for the Moderate Master Plan. This document constitutes the Master Plan Scope Report.

**FIGURE 2****SUMMARY OF MASTER PLAN APPROACH OPTIONS**

<b>MASTER PLAN TYPE</b>	<b>ESTIMATED COST (TO PLAN)</b>	<b>ESTIMATED SCHEDULE (TO PLAN)</b>	<b>COST TO IMPLEMENT OVER 20-YEAR- PERIOD</b>
Comprehensive Master Plan	\$ 15 - \$ 20 Million (minimum)	80 + Months	\$ 75 Million +
Extensive Master Plan	\$ 8 - \$ 10 Million	60 - 80 Months	\$ 30 - \$40 Million (minimum)
Moderate Master Plan	\$ 4 - \$ 7 Million	36 - 60 Months	\$ 10 - \$15 Million
Limited Master Plan	\$ 2 - \$ 3 Million	18 - 36 Months	\$ 7 - \$10 Million
No Project	\$ 0	--	Many millions in damage to environment and lost economic opportunities

Two additional Management Committee meetings were held after the submission of the Draft Final Report (January 4, 1994 and January 18, 1994) to discuss the draft Final Scope Report and to review specific comments from Management Committee members. At the direction of the Flood Control District and the Management Committee, the Master Plan Study Area was extended to include the full 95-mile watercourse from Granite Reef Dam to Painted Rock Reservoir. Several members expressed dissatisfaction with the concept of a management entity being created to direct the Master Plan effort.

In addition, member cities of the Maricopa Association of Governments (MAG) expressed an unwillingness to surrender any land use planning authority to a management entity; most MAG members preferred that the Flood Control District maintain responsibility for traditional flood control and floodplain management activities, leaving land use decisions to local jurisdictions. Representatives of USEPA expressed concerns about the timing and sequence of NEPA compliance, permit approvals, environmental enhancements, and proposed mitigation measures and mitigation banking. These comments and concerns have been considered and incorporated into this Final Report for the Salt-Gila Watercourse Master Plan Scoping Project.

### **1.3 FEATURES OF THE MODERATE MASTER PLAN OPTION**

The intent of the various elements of the Moderate Master Plan is to achieve the maximum benefits from a master plan with minimum surrender of local control over the development, implementation, and enforcement of the Master Plan within a reasonably short (3 to 6 years) timeframe and at a fundable cost. The Moderate Master Plan includes "something for everyone" in that it addresses all the areas of concern that were identified both by the Management and Executive Committees and the Maricopa County public.

The Moderate Master Plan also falls within the moderate range as far as possible financial commitment from the Master Plan Participants is concerned, and includes compliance with the regulatory process necessary to achieve an important goal of streamlined permitting along the Watercourse. Components of the Moderate Master Plan are described briefly below; a full description of all five Master Plan Alternatives is found in Appendix B.

#### **1.3.1 Moderate Master Plan Regulatory Component**

The Moderate Master Plan calls for the formation of a management entity early in the Master Plan process. The management entity would coordinate and direct the plan development and implementation process. The entity could be an existing Maricopa County agency or jurisdiction or a new entity composed of representatives from the Master Plan Participants. There is an assumption that this Management Entity would coordinate the local Clean Water Act Section 404 permitting and monitoring on behalf of the Master Plan Participants. Enforcement of permit conditions and land-use plans would remain with existing agencies (e.g., USACOE, USEPA).

Formal NEPA review, possibly in the form of a Programmatic Environmental Impact Statement, would be completed during the Master Plan development process, thereby allowing for future

Plan modifications without major new environmental studies. The NEPA process would also lay the groundwork for the development of site-specific, detailed Plan Elements that could be modified and adopted by individual jurisdictions. The Moderate Master Plan would also create a framework for close coordination of land use planning between jurisdictions within the Master Plan Area. The management entity would have coordination and oversight responsibility for Plan implementation, but no authority to mandate compliance.

### **1.3.2 Moderate Master Plan Institutional Component**

One of the first tasks to be addressed in the planning process is delineating the Master Plan Study Area and identification of all participating parties, including land-use control jurisdictions and resource management agencies. During the organization phase of the Master Plan process, a cooperative master plan implementation agreement would be executed among most affected jurisdictions and agencies, but enforcement authority for land use and resource management issues would be retained by each jurisdiction or agency, as currently carried out. A framework for public input, planning participation and support of key local public interest groups (e.g., Sierra Club, Audubon Society, Chambers of Commerce, property owners) would be instituted early in the process and continued throughout the development of the plan.

### **1.3.3 Moderate Master Plan Technical Component**

The outcome of the planning process and adoption of a Master Plan would be a series of detailed, coordinated technical sub-plans, called Plan Elements. Specific objectives of each Participant could be achieved through the refinement to meet local needs of these Plan Elements, which would be subsequently adapted as part of the General Plans of Master Plan Participants. Examples of possible elements are:

- comprehensive flood control and hydraulic management guidelines, including and maintenance of a watercourse hydraulic model;
- uniform water quality guidelines for discharge, recharge, and withdrawals by local jurisdictions and agencies;
- uniform guidelines for sedimentation control and aggregate management by affected jurisdictions and agencies;
- uniform recreation management guidelines;
- natural resource management guidelines;
- sharing of regional planning and environmental information among jurisdictions and agencies and creation of a document repository for relevant information.

### **1.3.4 Moderate Master Plan Social/Economic Component**

Management entity staff and specialized consultants would investigate potential funding sources and determine levels of funding needed to support Moderate Master Plan preparation and implementation. Use of a series of funding phases will minimize "up-front" costs to Master Plan Participants, see Section 2.2 for a detailed explanation of project phases. Although the planning

process would probably have to be funded through Master Plan Participant contributions until the end of Phase II (Plan Organization), outside funding would be sought to cover the bulk of planning costs during Phases III and IV (Plan Development and Plan Implementation). At an early stage (during organization of the Master Plan process), a public participation program that includes information, education, and involvement opportunities in the planning and implementation process would be developed. Quality of life goals to be met within the Master Plan Area would be developed through involvement of Master Plan Participants and the Maricopa County public, as would opportunities for investigation, preservation, and recognition of historical and cultural resources within the Master Plan Area.

### **1.3.5 Moderate Master Plan Environmental Component**

Based on the expressed interest and support of resource management agencies and the interested public, the Master Plan Participants would designate key actions to be carried out as part of planned improvements or enhancements of watercourse environmental characteristics. These enhancements would be identified during the Phase II Planning process so that the required actions would be incorporated into the Master Plan concept and subsequently considered in the regulatory review process. The Moderate Master Plan would encourage (though not mandate) a number of environmental enhancements to the Master Plan Area, such as:

- acceleration of cleanup of landfills, hazardous wastes, and other environmentally degrading "hot spots;"
- creation, restoration, and management of natural habitat zones in non-conflicting portions of the Master Plan Area;
- identification, creation, and management of offsite environmental mitigation opportunities within the Master Plan Area;
- identification of cumulative environmental impacts and benefits;
- establishment of a streamlined environmental review process for any plan-conforming development proposals within the Master Plan Area;
- identification of opportunities for wildlife enhancement and recreational "ecotourism" within the Master Plan Area;
- reclamation of aggregate mining areas; and
- creation of an awareness of environmental impacts of upstream users/jurisdictions on downstream users/jurisdictions.

### **1.3.6 Moderate Master Plan Planning Issues**

Various issues and considerations are associated with the Moderate Master Plan approach. While a Moderate Master Plan would be more institutionally feasible than a Comprehensive or Extensive Master Plan since less local authority would be relinquished, there would be no enforcement authority granted to the management entity to implement the Plan. Any "enforcement" would result from requiring proposed developments or land use change within the Master Plan Area to conform to all Plan conditions in order to obtain expedited permits and environmental approvals. The Moderate Master Plan would also require a lesser degree of

funding commitment and agency support than the Comprehensive or Extensive Plans. Adopting a Moderate Master Plan would involve lower up-front costs before benefits of implementation can be determined. The Moderate Master Plan, including development of Plan Elements and environmental enhancement guidance, could be completed in less than 5 years.

### **1.3.7 Moderate Master Plan Implementation Consequences**

Adoption and implementation of a Moderate Master Plan would enhance the potential for the Salt-Gila Watercourse to become the center of the region as an economically viable multi-use resource, but would offer few direct economic development incentives. Even limited implementation would provide some benefits to most interested parties and result in moderate improvements to the environment and reduction of those cumulative impacts created by inconsistent planning, policies, and regulations within the watercourse.

The Moderate Master Plan would not curtail local control and authority (i.e., city and county authority) within the Master Plan Area; costs of implementation would be locally controlled. Site- or jurisdiction-specific Plan Elements could be implemented individually according to priorities set by local jurisdictions. However, the Moderate Master Plan would not be financially self-sufficient, nor would it achieve "highest and best use" objectives. Based on the assumptions and scope outlined in this report, estimated costs for developing a Moderate Master Plan would be approximately \$7 million (planning and approval costs only). This estimate assumes that Phase II would be primarily funded by Master Plan Participants (although funding might be available through other sources) and that Phases III and IV could be funded by state and Federal grants or special appropriations, only about 10% of the total cost would have to be borne by the local Participants.

## 2.0 APPROACH TO MASTER PLAN SCOPING

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### 2.1 MASTER PLAN SCOPING RATIONALE

The approach used to scope the work effort, cost, and schedule for the Moderate Master Plan is based on guidance and direction received from the Executive and Management Committees, as well as from the Flood Control District, throughout the Scoping Project. This approach is designed to provide the framework for a phased, iterative process which allows for frequent "mid-course" progress assessments and changes (if desired) by the Master Plan Participants. For instance, early in Phase II (Master Plan Planning), there is an opportunity for Master Plan Participants to revisit the goals and objectives of the Master Plan that were established in Phase I. At this time refinements or changes could be incorporated. Any adjustments might impact budget or subsequent tasks, but through the iterative approach these impacts would be factored into the planning process before resources are expended or funds committed.

These assessment and evaluation opportunities allow the Master Plan Participants to make relatively modest investments of funds on an incremental basis, while realizing planning and implementation benefits. Costs and funding commitment requirements would be "backloaded" wherever possible, deferring contributions until benefits can begin to be received.

The key elements in the Moderate Master Plan approach are:

- formation of a management entity with coordination and oversight responsibility during the Master Plan process;
- multi-phased approach with separate phase components to address: (1) organization, (2) incremental funding, (3) plan development, and (4) implementation of the Master Plan;
- phased funding commitments with multiple funding sources possible; initial funding be committed by the Master Plan Participants, then funding sought from grants and appropriations by state/Federal agencies to minimize further local expenditures;
- low up-front costs by deferring the more expensive Plan Element development and refinement to end of the master plan process and by providing a series of "checkpoints" at which Master Plan Participants may reassess the level of future funding or alter the scope and nature of Plan components;
- a small, but full-time administrative and technical staff assigned by the management entity to direct the planning process throughout the development and implementation of the Master Plan;
- opportunities for Master Plan Participants to commit in-kind services and resource support in lieu of monetary commitments; this approach assumes selective reliance on

consultants (to minimize cost) and use of agency staff (to maximize available resources) for technical support.

## **2.2 MASTER PLAN DEVELOPMENT PHASING**

As shown in Figure 3, development of the Master Plan has been separated into a series of sequential but generally independent phases and sub-phases; Plan implementation would constitute a fourth phase, but is not addressed in this Report. Phase I represents the current Scoping Project, soon to be completed. Detailed Master Plan planning begins with Phase II when the organizational framework for the management of the Master Plan development process will be designed and put into place. In addition, Phase II will include development and initial implementation of the Public Involvement Program, the establishment of quality of life goals for the Master Plan Area, and identification and prioritization of Master Plan objectives.

Once the Master Plan concept and objectives are fully identified, Phase II continues with identification of future program funding sources and commitment by Participants and supporting agencies for both internal and external funding. With funding commitments in place, development of the conceptual Master Plan, development of Master Plan alternatives, completion of required environmental documentation (NEPA review), and identification of cumulative impacts and benefits associated with each alternative is completed. As part of the environmental documentation, technical studies would be conducted to establish baseline conditions for the Master Plan study area. With baseline environmental information developed and an assessment of impacts completed, the stage would be set for obtaining a Section 404 General Permit for the Master Plan Area and for executing an MOU with regulatory agencies having oversight in the Master Plan Area.

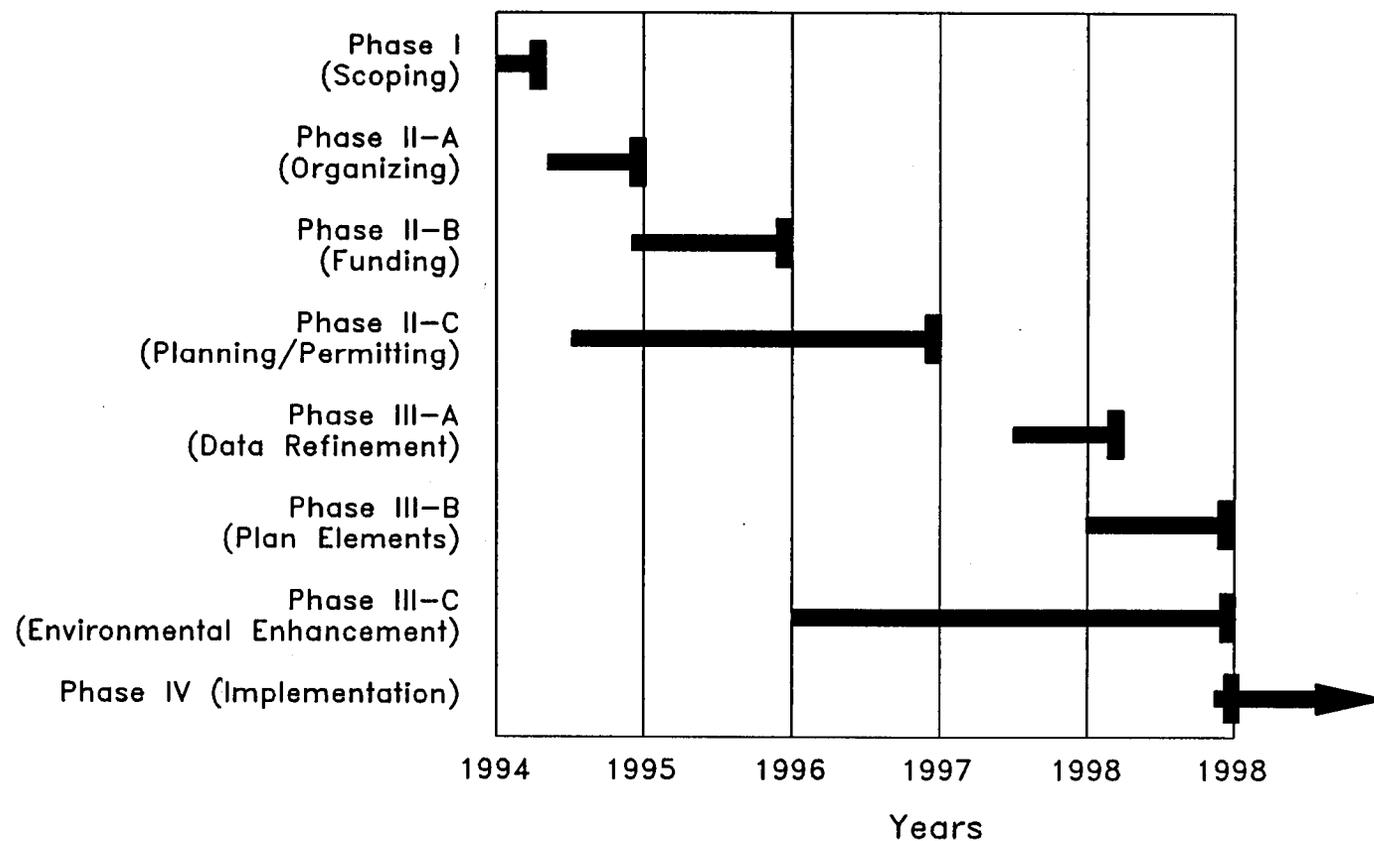
Baseline environmental information developed in the environmental review process will also guide the development of Plan Elements. It is envisioned that general Plan Elements that would meet compliance requirements of the General Permit process for Section 404 compliance would be produced to allow for local review of projects subject to Section 404. These Plan Elements could then be refined or modified for site- or jurisdiction-specific uses. This strategy is intended to provide for a greatly expedited permitting and regulatory review process for all development or change occurring in the Master Plan Area which conforms to Master Plan provisions and environmental protection measures.

Any final revisions to the Master Plan Concept would be completed at this time and the Plan would be brought to the Master Plan Participants for approval and for final funding commitments leading to Phase III of the planning process. Total Phase II costs are estimated to be approximately \$3.8 million, with the majority of costs occurring during the final half of the 3-year process.

Phase III activities involve refinement and production of the final Master Plan, with additional data development in completion of technical, environmental, and socioeconomic studies to fill identified data gaps. Individual Master Plan Elements will be selected, authorized, prepared

Figure 3

# MASTER PLAN PHASE RELATIONSHIPS AND CHECK-POINTS



and approved at this time. Plans for appropriate environmental enhancement projects will also be finalized, and guidance documents prepared for such activities as landfill remediation, natural habitat management, and mitigation management. Phase III costs will total approximately \$3.3 million over a 16-month period, leading to Plan Implementation in less than five years following completion of the Project Scope (Phase I).

### **2.3 MASTER PLAN ORGANIZATION AND ADMINISTRATION**

Creation of a Master Plan management entity is considered to be very important to the day-to-day planning and implementation process. This management entity may be an existing Maricopa County agency or a consortium of jurisdictions and agencies, or more simply, assignment of dedicated staff from a number of Master Plan Participants. Identification and designation of the management entity by the Management and Executive Committees is the first task of Phase II. Once the makeup of the management entity is determined, a cooperative agreement will be executed by the Master Plan Participants, initial funding committed, and a full-time staff will be hired to direct the day-to-day planning effort. A possible funding scenario could entail Flood Control District funding the management entity staff with other Master Plan Participants providing office space and administrative support.

Although the approach to planning and implementing the Master Plan is based on use of both existing resources and consultants, a small, dedicated professional management entity staff is essential. This staff should consist of an Executive Director, a Technical Manager, and an Administrative Assistant who will be charged with managing the day-to-day work on the Master Plan, as well as assuming responsibility for some key tasks such as consultant selection, pursuing funding sources, and coordinating technical aspects of the Plan development.

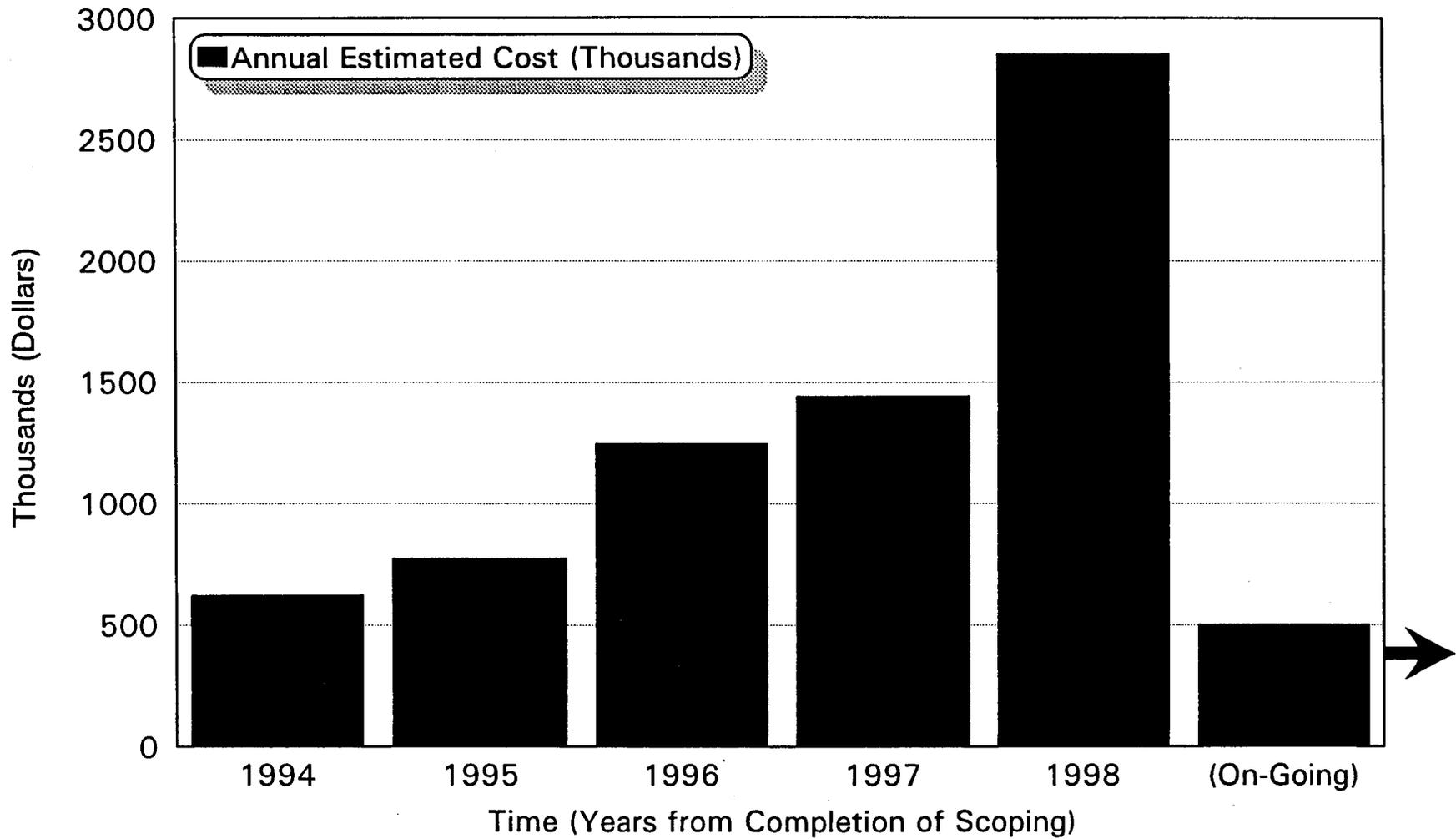
### **2.4 MASTER PLAN COSTS AND FUNDING**

Costs of producing and carrying out the Master Plan process will vary greatly from year to year; see Figure 4 for estimated distribution of costs during the first seven years of master planning. Responding to instructions from the Management Committee and Flood Control District staff, the Scoping Consultant has estimated costs associated with each task needed to complete the Master Plan process. Cost estimates represent the total sum needed to perform the deliverable task within the proposed timeframe, including both labor costs and associated direct costs, based on an estimate of the number of labor-hours required and direct costs needed to support the labor effort.

Because labor-hour estimates are necessarily speculative for tasks to be performed during the later stages of Phase II and throughout Phase III (since many of these tasks will not finally be defined until the planning process is well underway), generic costs have been provided based on the assumptions provided for the Detailed Master Plan Task descriptions in Section 4.0 of this report.

Figure 4

ESTIMATED MASTER PLANNING COSTS OVER TIME



Management entity staff costs burdened have been assumed to average \$38.00 per hour each for the Executive Director, Technical Director, and Administrative staff (at a 40% burden rate over raw salary), with \$60,000 allocated each year for rent, travel, and communication; no in-kind contributions of staff, labor, or direct costs (office space and support equipment) by Master Plan Participants has been included. Consultant costs would be higher on a per hour basis, but would not require full-time staff coverage and overhead; these costs were estimated to average \$75.00 per hour (fully burdened, including 10% direct costs and 15% fee), assuming that experienced, senior level consulting staff would be required to provide most of the required services.

Funding was assumed to come entirely from Master Plan Participant contributions through Phase II-B (first two years), with the remainder of funds being provided by a combination of grants and state/federal budget allocations (with local Master Plan Participants making up any shortfalls) through the end of Phase III-C (last three years). Long-term implementation costs (Phase IV) would probably average \$400,000 to \$500,000 per year and this would likely have to be provided through local-share contributions. See Section 3 for detailed costs estimated by task.

Future costs and schedule by phase and sub-phase are estimated to be as follows:

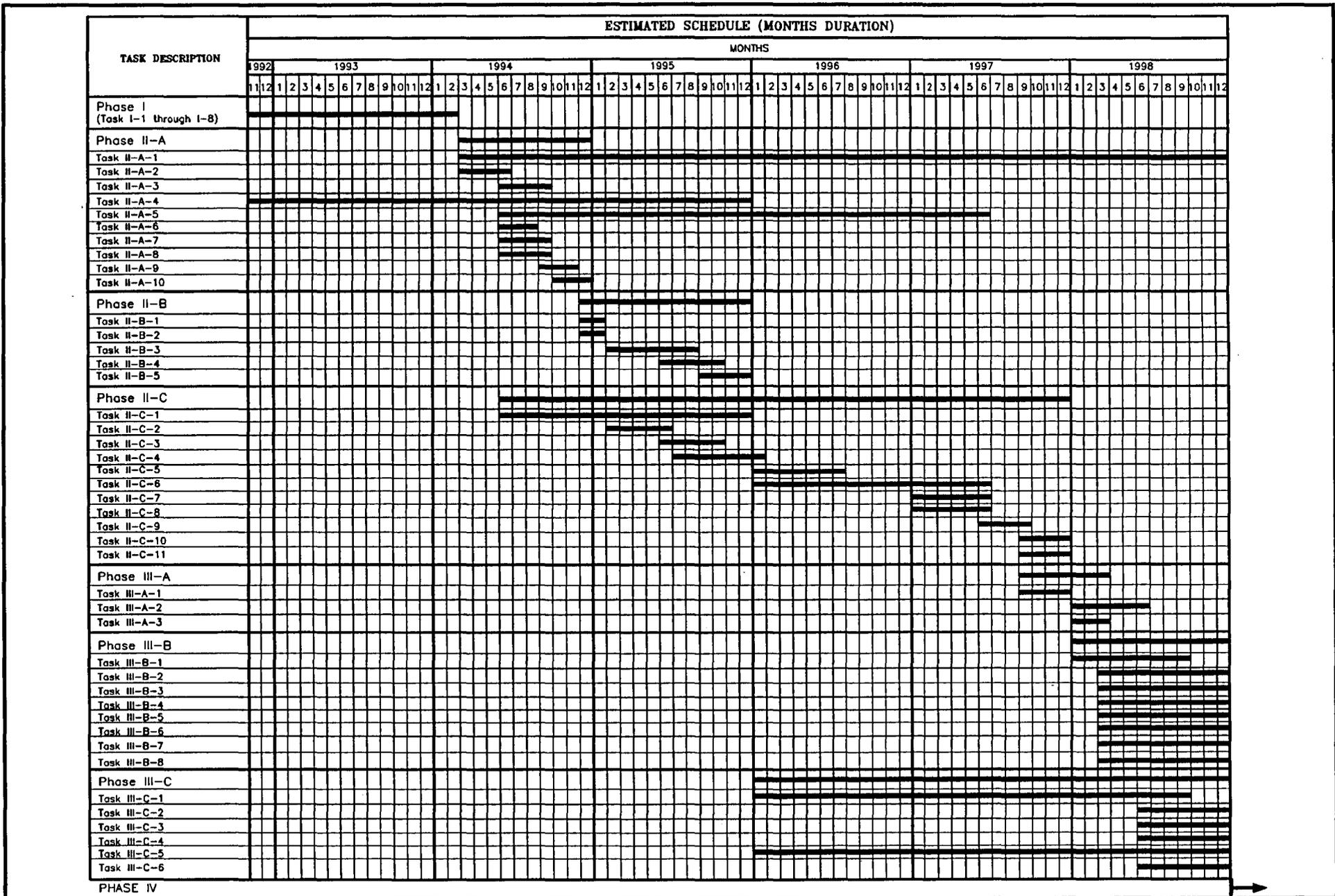
SCHEDULE	PHASE	TITLE	EST. COST	TIME TO COMPLETE
11/92 - 2/94	I-A	Develop Master Plan Scope	Completed	
3/94 - 12/94	II-A	Program Organization	\$619,000	10 Months
12/94 - 12/95	II-B	Program Funding	\$107,000	13 Months
6/94 - 12/97	II-C	Develop Master Plan/PEIS	\$2,888,000	42 Months
9/97 - 3/98	III-A	Data Development/ Refinement	\$131,000	6 Months
1/98 - 12/98	III-B	Complete Specific Plan Elements	\$2,823,000	12 Months
1/96 - 12/98	III-C	Prepare/Implement Environmental Enhancements	\$356,000	36 Months
<b>Total Time: 57 Months (after Scope Phase Completion)</b>			<b>Total Estimated Cost: \$6,924,000</b>	

Again, it should be emphasized that the cost estimates (especially for later phases) are the best reasonable current estimates for scoping purposes, but are definitely subject to further refinement and adjustment as plan development proceeds.

## 2.5 MASTER PLAN DEVELOPMENT SCHEDULE

One of the objectives of the planning process is to obtain benefits of master planning as rapidly as possible, given the realities of institutional and financial constraints. Based on discussions with members of the Management Committee and observation of typical project funding activities by likely funding sources, the Scoping Consultant has tried to be conservative but realistic in designing the proposed schedule and sequence of tasks. Further compression of the schedule is possible by conducting more tasks concurrently and allowing overlap of project phases, but this schedule reduction compromises the Master Plan Participants' control over the planning process.

The planning and development of the Master Plan following scoping is anticipated to take approximately 57 months, or less than 5 years. Figure 5 depicts the task flow relationships and suggested schedule for completion of key tasks in the process. This schedule has been designed to proceed as rapidly as possible through the planning process while still allowing for regular progress reviews and "checkpoints" by Participants before proceeding to greater levels of commitment. The phasing of project tasks also defers funding of major planning activities until the later stages of plan development. A start date for Phase II has been assumed to be March, 1994 with completion of all Master Plan components and the beginning of Plan implementation (Phase IV) by December, 1998. Most tasks have some degree of overlap with other tasks in order to compress the schedule as much as possible. Details of the schedule (by task) are shown in Section 3.0 of this report, Master Plan Summary Table.



**MASTER PLANNING SCHEDULE AND TASK FLOW DIAGRAM**

Project No.: 924X128A

Date: DEC. 1993

Project:

SALT GILA WATERCOURSE MASTER PLAN

Fig.: 5

### 3.0 MASTER PLAN SUMMARY TABLE

The following table provides a sequential summary and overview of the planning process by phase, sub-phase, and task, including a breakdown of schedule, estimated costs, and suggested funding sources.

Task Description	Responsibility	Estimated Schedule (months duration)	Estimated Cost (\$000)	Potential Funding Sources
<b>PHASE I: MASTER PLAN SCOPING (11/92 -2/94)</b>				
<p>Phase I-(Tasks I-1 through I-8): Develop Master Plan Scope.</p> <p>Establish Master Plan goals, mission statement; create public involvement program; identify and evaluate available data; define institutional/regulatory/technical issues; select preferred approach to Master Plan process; develop work scope, costs, and schedule.</p>	Flood Control District of Maricopa County / Executive and Management Committees / Consultant	November 1992 to February 1994 (15 mos.)	\$ 108	Flood Control District of Maricopa County
<b>PHASE II: MASTER PLAN PLANNING</b>				
<b>Phase II-A: Program Organization</b>	--	<b>3/94 - 12/94</b>	<b>\$ 619</b>	--
Task II-A-1: Designate/create Master Plan management entity and assign full-time staff. (5 yrs @ \$300K/yr)	Management / Executive Committees	Start 3/94 - Ongoing through Phase IV implementation (60 mos)	\$300/yr (\$1,500 total for all phases)	Master Plan Participants / Federal, State, Local Grants / Possible in-kind services
Task II-A-2 Develop and execute cooperative agreement and Phase II funding commitment among Participants.	Staff / Master Plan Participants	3/94 - 6/94 (4 mos)	19	Master Plan Participants
Task II-A-3: Delineate Master Planning Area.	Staff / Master Plan Participants	6/94 - 9/94 (4 mos)	6	Master Plan Participants
Task II-A-4: Complete FEMA Floodplain Insurance Study for the 72-mile reach of Salt-Gila Watercourse (original Master Plan Study Area)	FCD	9/91 - 12/95	Already budgeted by FCD	FCD
Task II-A-5: Engage Public Involvement Consultant. Create Public Involvement Program.	Staff / Consultant	6/94 - 6/97 (36 mos)	225	Master Plan Participants / Federal, State, Local Grants
Task II-A-6: Establish quality of life goals for Master Plan Area and identify public expectations.	Citizens / Master Plan Participants / Public Involvement Consultant	6/94 - 8/94 (3 mos)	14	Master Plan Participants

<b>Task Description</b>	<b>Responsibility</b>	<b>Estimated Schedule (months duration)</b>	<b>Estimated Cost (\$000)</b>	<b>Potential Funding Sources</b>
Task II-A-7: Identify specific Master Plan content objectives.	Citizens / Master Plan Participants / Public Involvement Consultant	6/94 - 9/94 (4 mos)	18	Master Plan Participants
Task II-A-8: Identify Potential Mitigation Banking and Environmental Enhancement Opportunities within Master Plan Study Area	Citizens / Master Plan Participants / Public Involvement Consultant	6/94 - 9/94 (4 mos)	6	Master Plan Participants
Task II-A-9: Prioritize detailed Master Plan objectives (for funding and implementation purposes).	Citizens / Master Plan Participants / Public Involvement Consultant	9/94 - 11/94 (3 mos)	15	Master Plan Participants
Task II-A-10: Select Consultant for Master Plan Development and funding tasks.	Staff / Master Plan Participants	10/94 - 12/94 (3 mos)	10	Master Plan Participants
<b>Phase II-B: Program Funding</b>	--	<b>12/94 - 12/95</b>	<b>\$ 107</b>	--
Task II-B-1: Create detailed budget for remaining Master Plan process.	Consultant / Staff	12/94 - 1/95 (2 mos)	10	Master Plan Participants
Task II-B-2: Identify potential external funding sources.	Consultant / Staff / Master Plan Participants	12/94 - 1/95 (2 mos)	15	Master Plan Participants
Task II-B-3: Pursue external funding sources.	Consultant / Staff / Master Plan Participants	2/95 - 8/95 (6 mos)	53	Master Plan Participants
Task II-B-4: Obtain external funding commitments (including Federal and state budget allocations).	Staff / Master Plan Participants	6/95 - 10/95 (5 mos)	16	Master Plan Participants
Task II-B-5: Obtain internal funding commitments for Phase III (Master Plan Development) and Phase IV (Initial Master Plan Implementation).	Master Plan Participants / Staff / Consultant	9/95 - 12/95 (4 mos)	13	Master Plan Participants
<b>Phase II-C: Develop Conceptual Master Plan</b>	--	<b>6/94 - 12/97</b>	<b>\$2,888</b>	--
Task II-C-1: Establish Master Plan Area Data Base and Information Repository.	Consultant / Staff / Master Plan Participants / Other Interested Parties and Agencies	6/94 - 12/95 (18 mos)	101	Master Plan Participants / Federal, state, local grants
Task II-C-2: Outline Master Plan Technical Elements.	Consultant / Staff / Master Plan Participants	2/95 - 6/95 (5 mos)	18	Master Plan Participants / Federal, state, local grants
Task II-C-3: Develop Detailed Conceptual Master Plan and Alternatives (up to four scenarios).	Consultant / Staff / Master Plan Participants / Citizens of Master Plan Area	6/95 - 10/95 (5 mos)	89	Master Plan Participants / Federal, state, local grants

Task Description	Responsibility	Estimated Schedule (months duration)	Estimated Cost (\$000)	Potential Funding Sources
Task II-C-4: Determine NEPA compliance process and permitting requirements.	Consultant / Staff / Master Plan Participants / Regulatory Agencies	7/95 - 1/96 (7 mos)	12	Master Plan Participants / USACOE
Task II-C-5: Identify cumulative impacts and benefits of each alternative within Master Plan Area.	Consultant / Staff / Master Plan Participants / Regulatory Agencies / Citizens of Master Plan Area	1/96 - 7/96 (7 mos)	24	Master Plan Participants / Federal, state, local grants
Task II-C-6: Complete appropriate NEPA documentation (e.g., Programmatic EIS) including baseline environmental studies, NEPA compliance process, and associated reviews (e.g., NHPA Section 106).	Consultant / Master Plan Participants / Regulatory Agencies / Staff	1/96 - 6/97 (18 mos)	\$ 1,306	USACOE or EPA Grant / Master Plan Participants
Task II-C-7: Obtain Clean Water Act Section 404 General Permit for Master Plan Area.	Consultant / Master Plan Participants / U.S. Army Corps of Engineers	1/97 - 6/97 (6 mos)	156	Master Plan Participants
Task II-C-8: Execute an MOU with all appropriate regulatory agencies having oversight responsibilities for Master Plan Area.	Master Plan Participants / Regulatory Agencies	1/97 - 6/97 (6 mos)	6	Master Plan Participants
Task II-C-9: Revise the detailed Master Plan Concept (Task II-C-3) to conform with approved conditions and limitations of regulatory agencies.	Consultant / Staff / Master Plan Participants / Citizens	6/97 - 9/97 (4 mos)	13	Master Plan Participants
Task II-C-10: Obtain approval of revised Master Plan and final funding commitments for Phase III and IV from Participants.	Staff / Elected Officials of Master Plan Area	9/97 - 12/97 (4 mos)	13	Master Plan Participants
Task II-C-11: Select specialized Consultants to prepare technical studies / plan elements.	Staff / Master Plan Participants	9/97 - 12/97 (4 mos)	25	Master Plan Participants
<b>PHASE III: MASTER PLAN DEVELOPMENT</b>				
<b>Phase III-A: Data Development and Application</b>	-	9/97 - 3/98	\$ 131	-
Task III-A-1: Review Master Plan Area Data Base and Information Repository (created in Task II-C-1) and identify data gaps or additional information needs.	Consultant / Staff	9/97 - 12/97 (4 mos)	19	Master Plan Participants / Federal, state, local grants
Task III-A-2: Conduct studies to fill remaining data gaps.	Consultant / Regulatory Agencies	1/98 - 6/98 (6 mos)	94	Master Plan Participants / Federal, state, local grants / agencies

Task Description	Responsibility	Estimated Schedule (months duration)	Estimated Cost (\$000)	Potential Funding Sources
Task III-A-3: Establish voluntary Data Base Upkeep Program among participating agencies.	Master Plan Participants	1/98 - 3/98 (3 mos)	18	Master Plan Participants / Agencies
<b>Phase III-B: Prepare Specific Plan Elements</b>	--	<b>1/98 - 12/98</b>	<b>\$ 2,823</b>	--
Task III-B-1: Refine computer-based watercourse hydraulic model for expanded Master Plan Area. (Initially developed as part of Task II-A-4.)	Staff / Consultant / Flood Control District / US Army Corps	1/98 - 9/98 (9 mos)	550	Master Plan Participants / USACEO / FCD of MC
Task III-B-2: Prepare Hydraulic/Flood Control Plan Element for Master Plan Area.	Staff / Consultant / Flood Control District / US Army Corps	3/98 - 12/98 (10 mos)	250	Master Plan Participants / FCD of MC
Task III-B-3: Prepare Water Quality Plan Element for Master Plan Area (including discharge limits and guidelines for recharge and withdrawal within Master Plan Area).	Staff / Consultant / ADEQ / DWR / EPA	3/98 - 12/98 (10 mos)	238	Master Plan Participants / USEPA / ADEQ
Task III-B-4: Prepare Sediment Control/Aggregate Management Plan Element for Master Plan Area.	Staff / Consultant / FCD (maybe) / SCS / ADEQ / EPA / ARPA	3/98 - 12/98 (10 mos)	313	Master Plan Participants / USACOE / USEPA
Task III-B-5: Prepare Natural Resources Management Plan Element (biota, habitat, mitigation programs) for Master Plan Area.	Staff / Consultant / USF&WS / AG&FD / EPA / ADEQ	3/98 - 12/98 (10 mos)	506	Master Plan Participants / USFWS / AZ Fish & Game
Task III-B-6: Prepare Recreational Uses Plan Element for Master Plan Area.	Staff / Consultant / Citizens of Master Plan Area / Elected Officials of Master Plan Area / Master Plan Participants / AG&FD / ADEQ	3/98 - 12/98 (10 mos)	191	Master Plan Participants / State / County
Task III-B-7: Prepare Cultural Resources Management Plan Element for Master Plan Area (fulfilling NHPA Section 106).	Staff / Consultant / Native American Interests / SHPO / Elected Officials of Master Plan Area	3/98 - 12/98 (10 mos)	275	Master Plan Participants / SHPO / Federal, state, local grants / Universities
Task III-B-8: Prepare Agricultural/Irrigation Uses Plan Element for Master Plan Area (with emphasis on Gillespie Dam to Painted Rock Reservoir).	Master Plan Participants / ADWR/ Gila Bend-Dendora Valley Water Users	3/98 - 12/98	200	Master Plan Participants / AZ DWR
<b>Phase III-C: Plan/Implement Environmental Enhancement</b>	--	<b>1/96 - 12/98</b>	<b>\$ 356</b>	--

<b>Task Description</b>	<b>Responsibility</b>	<b>Estimated Schedule (months duration)</b>	<b>Estimated Cost (\$000)</b>	<b>Potential Funding Sources</b>
Task III-C-1: Create Environmental Enhancement Task Force (composed of all participating agencies and jurisdictions) to guide environmental efforts and to implement the goals established in Task II-A-8.	Master Plan Participants / Citizens of Master Plan Area / Elected Officials of Master Plan Area / Consultant	1/96 - 9/98 (32 mos)	36	Master Plan Participants
Task III-C-2: Prepare guidance document for landfill remediation within the Master Plan Area.	Staff / Consultant / EPA / ADEQ / DWR / Citizens	6/98 - 12/98 (6 mos)	70	Master Plan Participants / ADEQ / USEPA
Task III-C-3: Prepare guidance document for creation, restoration, and management of natural habitat portions of Master Plan Area.	Staff / Consultant / ADEQ / AG & FD / DWR / EPA / Citizens / Master Plan Participants	6/98 - 12/98 (6 mos)	156	Master Plan Participants / AZ Game & Fish / USFWS
Task III-C-4: Designate potential offsite mitigation management areas within the Master Plan Area.	Staff / Consultant / Citizens / Master Plan Participants	1/96 - 9/98 (36 mos)	19	Master Plan Participants
Task III-C-5: Establish Mitigation Banking Program (in Master Plan Area) for off-site mitigation of environmental impacts in Maricopa County.	Master Plan Participants	1/96 - 12/98 (48 mos)	25	Master Plan Participants
Task III-C-6: Prepare guidance document for reclamation of aggregate mining areas within the Master Plan Area.	Staff / Consultant / Rock Products Association / Master Plan Participants / Citizens	6/98 - 9/98 (6 mos)	50	Master Plan Participants / USACOE

# **SALT-GILA WATERCOURSE MASTER PLAN EXECUTIVE COMMITTEE MEETING INFORMATION PACKET**

## **I. Re-Introduction to the Watercourse Master Plan**

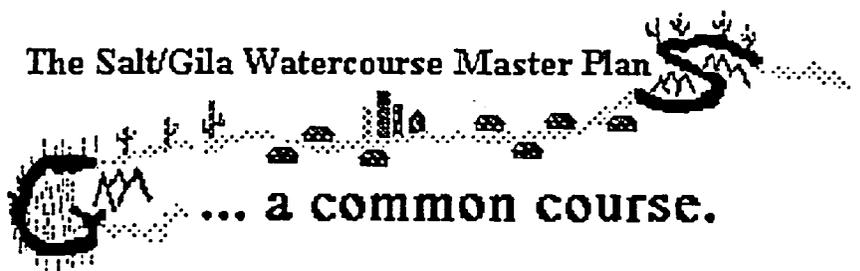
**A. Background** - While attending a conference in 1987, Dan Sagramoso, Chief Engineer and General Manager of the Flood Control District and District staff became aware of a massive riverine planning effort conducted by the Fort Worth District of the Corps of Engineers and the North Central Texas Regional Council of Governments regarding the Trinity River in the Dallas/Fort Worth area.

The Flood Control District then began to develop plans for implementing a similar planning effort for the Salt-Gila River. The necessity of undertaking the effort to master plan the Salt-Gila River is because current practices of regulatory actions taken by individual government agencies do not consider cumulative impacts.

Below is a chronological list of 22 significant documents, with a brief description of each, that have led up to the present step of the Scoping Study to present the alternatives and recommend the Moderate Master Plan. Attached are the complete documents for your further reference.

1. RESOLUTION FCD 88-18 - Signed by the Flood Control District Board of Directors December 14, 1988 authorizing the Chief Engineer and General Manager to coordinate and develop information necessary for master planning the use and regulation of the floodplains in Maricopa County.
2. Fact Sheet, February 1990 - The fact sheet discussed cumulative impacts, their effects, the current Federal funding constraints for attempting to develop a Federally-sponsored environmental master plan, and the Flood Control District's undertaking of the master plan at local expense.
3. SENATE BILL 1277 - Approved by the Governor May 4, 1990, stating that if a district has completed a "watercourse master plan," and if the plan has been adopted by the Board or by any other jurisdiction in that river or drainage system, then the Board and the governing body of each jurisdiction may adopt and shall enforce uniform rules for that system within the jurisdiction.
4. Fact Sheet, September 1990 - The fact sheet discussed the purpose and the need for Senate Bill 1277.
5. RESOLUTION FCD 90-10 - Signed by the Flood Control District Board of Directors November 5, 1990 authorizing the initiation of a master plan study of the Salt-Gila Watercourse from Granite Reef Dam to Gillespie Dam.

The Flood Control District began the master planning process by initiating two separate contracts. The first, Contract FCD 90-59 was to produce aerial and topographic mapping, a flood delineation study, and a sediment transport study. The sediment transport portion of the contract was evaluated as being too costly and was eventually dropped from the scope. The contract was subsequently split into two parts; mapping (remaining as existing Contract FCD 90-59) and delineation (new Contract FCD 92-01). Both contracts were awarded to Michael Baker, Jr., Inc.



6. RESOLUTION FCD 91-13 - Signed by the Flood Control District Board of Directors September 3, 1991 authorizing a flood insurance study from Granite Reef Dam to Gillespie Dam not to exceed \$2,300,000 and be compatible with master plan study resource criteria. This resolution led to Contracts FCD 90-59 and FCD 92-01. (The total amount of both contracts is \$2,213,549).

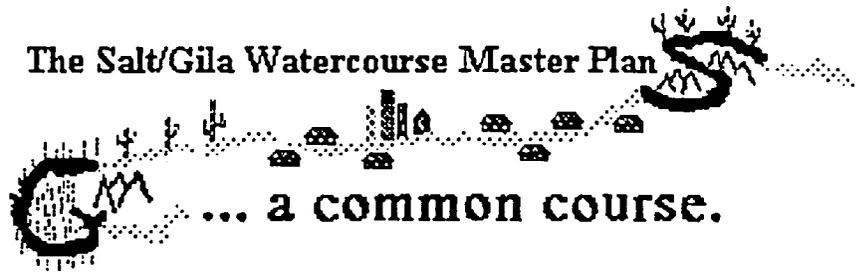
The second contract was to provide a Watercourse Master Plan and Regional Environmental Impact Statement (REIS): Contract FCD 90-60. Dames & Moore was selected as the consultant for Contract FCD 90-60. In negotiating the contract it was realized that the development of a master plan and REIS required a very large financial commitment, an amount underestimated by District planning staff. As a result, the Flood Control District Board of Directors did not authorize the contract and directed the District to conduct a cost scoping analysis as an interim step, before initiating the more significant master plan contract.

7. RESOLUTION FCD 91-15 - Signed by the Flood Control District Board of Directors December 9, 1991 authorized and directed the Chief Engineer and General Manager to complete a cost scoping analysis for the Salt-Gila Watercourse Master Plan.

The scoping analysis, or study, is an interim step in the Watercourse Master Plan. It is intended to identify the tasks, efforts, and time schedule for conducting an implementable and enforceable master plan and produce a report which can readily be converted to the scope of work for the master plan. None of the actual tasks or efforts will be performed in the scoping study.

A Salt/Gila Watercourse Master Plan presentation was given by Dan Sagramoso and then project manager Doug Toy at the Association of State Floodplain Managers (ASFPM) Multi-Objective Workshop held at Pittsburgh in November 1991. A similar presentation was given by Stan Smith, Deputy Chief Engineer, at another ASFPM conference in the summer of 1992.

8. RESOLUTION FCD 91-17 - Signed by the Flood Control District Board of Directors February 18, 1992 authorized the Chief Engineer and General Manager to advance the Corps of Engineers up to \$10,000 to develop and negotiate an intergovernmental agreement which will detail the Corps' involvement with an REIS for the Salt-Gila Watercourse Master Plan.
9. On July 15, 1992, Woodward-Clyde Consultants, Inc. was selected as the Scoping Study consultant. The contract fee is \$98,000 and the notice to proceed occurred on November 16, 1992. The final scope of work is provided.
10. Letter mailed October 26, 1992 to the Corps of Engineers, accompanied with a \$10,000 warrant, requesting formal Corps participation in the Salt-Gila Watercourse Master Plan.
11. Management Committee meeting held November 24, 1992. Meeting agenda consisted of introduction of the Scoping Study consultant, the Management Committee's role in assisting the Study, the contract schedule, status on the flood insurance study, and discussion of the Memoranda of Agreement with the Corps of Engineers.



12. Management Committee meeting held January 26, 1993. Meeting agenda consisted of presentation of the Scoping Study work plan, discussion of the Corps of Engineers' Letters of Permission, collection of preliminary data from Management Committee members supplied by their agencies, and a discussion of project study limits.

On February 1, 1993 Michael Baker, Jr., Inc. was authorized to initiate of work to regenerate and redo previously accomplished work. The new work was necessary because of topographic changes to the Salt-Gila River due to January 1993 flooding. The change order to accomplish this rework is \$157,093 and included all rework in both of the Michael Baker, Jr., Inc. contracts.

13. News release on February 12, 1993. Release sent to Executive and Management Committees and the Study Interest Group with a cover letter.

14. Draft Statement of Intention received from Corps of Engineers on March 2, 1993.

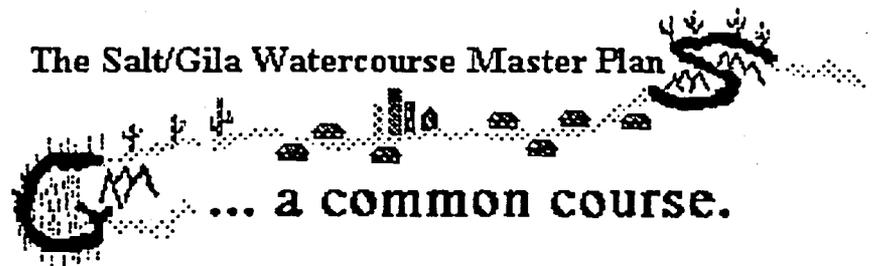
15. Management Committee meeting held March 23, 1993. Meeting agenda consisted of the status of the Scoping Study, the agenda for the upcoming public meeting, and an open forum discussion of Management Committee members' goals and objectives.

16. Fact Sheet, March 1993 - The fact sheet served to inform the public about the need to master plan the Salt/Gila River, some of the planning issues faced in the Scoping Study, the committees assembled to assist and drive the planning efforts, public involvement, and a flowchart of the planning process.

17. Public meeting held March 31, 1993. The meeting was not well attended and the public voiced concern about development in the river, pollution of the waterway, and there was considerable misperception that the master plan is a "front" for a Rio Salado type of development.

18. Management Committee meeting held May 18, 1993. Meeting agenda consisted of a briefing of the public meeting, discussion on SRP's operations of dams, discussion, invitation, and approval of SRP representation on the Management Committee, contract status report, discussion of goals and objectives, discussion of identified project constraints and opportunities, and institutional, regulatory, technical, environmental, economic, social, and public issues.

19. Management Committee meeting held June 1, 1993. Meeting agenda consisted of a working session to finalize the Study's goals and objectives, a discussion of current project issues, a working session to discuss and finalize institutional, regulatory, technical, social, economical, and public issues.



20. Management Committee meeting held June 29, 1993. Because the mission statement and the goals and objectives were not finalized at the June 1 meeting, the project manager conducted individual interviews with most members of the Management Committee from June 14 to June 21. The meeting agenda item for the June 29 meeting consisted of a review of the specific project issues as identified in the individual meetings, finalization of the goals and objectives, and preliminary discussions of the Executive Committee meeting.

21. Management Committee meeting held August 10, 1993. Meeting agenda consisted of presentation of master plan options and the format and agenda for the Executive Committee meeting.

22. Fact Sheet, August 1993 - The fact sheet discusses the project background, the finalized mission statement and goals and objectives, and also serves to address the misperceptions of the public meeting. The intent of the fact sheet is to put the work of the Scoping Study into perspectives at the time a decision is made in selecting a master plan option.

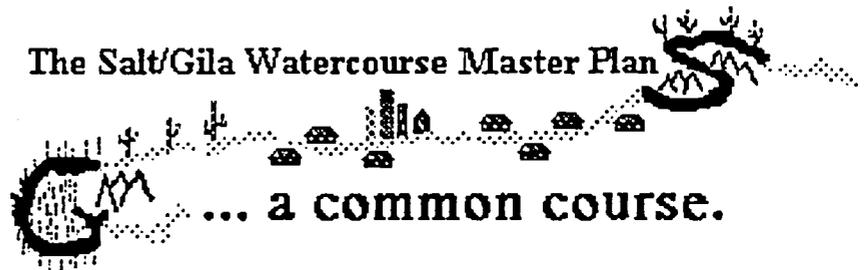
**B. Purpose** - The purpose, as originally conceived by the Flood Control District, was to develop and implement a master plan for the Salt/Gila River between Granite Reef Dam and Gillespie Dam, 72 miles, to better manage the River as a water conveying, economic, and environmental resource. The master plan would abandon the current practice of taking regulatory actions by individual government agencies without considering cumulative impacts. As mentioned, the flood insurance study is a component of the master plan and the Scoping Study is an interim step.

## II. Scoping Study

**A. Direction for the Scoping Study** - At the initiation of the Scoping Study, the goals to be addressed by the Salt/Gila Watercourse Master Plan, were comprised of three interrelated endeavors:

1. Defining the scoping tasks and efforts for the development of an implementable master plan;
2. Identifying acceptable land use alternatives that satisfy a balance of economic development, environmental values, and the maintenance of hydraulic continuity and floodplain management along the watercourse; and
3. Achieving a mechanism to facilitate Corps of Engineers permits of each accepted alternative in the master plan.

**B. Function of Management Committee** - The members of the Management Committee represent federal, state, and local jurisdictions, as well as industry and environmental interests. As such, the Committee was called upon in the first meeting to have strong involvement in data collection. The Scoping Study would not create new data, but rather rely on extensive existing data. The Committee would be expected to assist in data collection and also formulate the mission statement and the goals and objectives.



**C. Mission Statement and Goals & Objectives** - Within the first seven months of the Scoping Study contract, the master plan goals, as shown above, were evaluated and refined. The mission statement and the goals and objectives, as shown below, were finalized shortly after the June 29 Management Committee meeting. They are the result of data collection, Committee and consultant input, the public meeting on March 31 and the institutional, regulatory, economic, environmental, public, and social issues identified.

**MISSION STATEMENT** To develop a watercourse master plan for the Salt-Gila River that provides jurisdictions and entities along the watercourse with management tools to assess and manage the impacts of future development on the existing and planned natural and man-made environments.

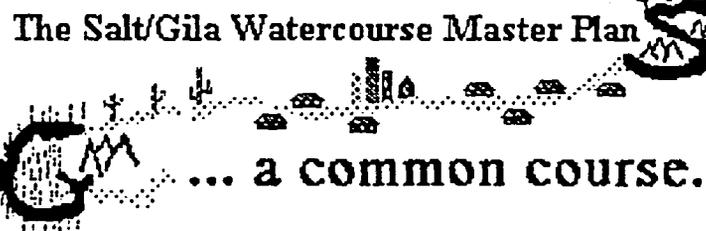
**GOALS AND OBJECTIVES**

1. To develop a hydraulic master plan that evaluates and manages the risks of loss of life and damages to property within the 100-year floodplain;
2. To identify existing conditions and assess future impacts of development on the natural and man-made environments;
3. To strive to develop consensus among the jurisdictions and entities on river management;
4. To maintain, protect, and enhance environmental quality and integrity;
5. To streamline and coordinate regulatory policies and procedures; and
6. To produce a master plan in the form that may be adopted by the Flood Control District Board of Directors and other jurisdictions along with uniform ordinances and/or regulations for enforcement.

Each of the six goals and objectives have components that are not listed here. Document 20 lists them completely.

**D. Master Planning Opportunities and Constraints** - The Scoping Study raised a number of issues and conditions that represent opportunities for improvement of the master plan if included. Other issues and conditions exist that may constrain or impede the master planning process if not obtained. Below, is a listing of issues and conditions that were raised.

- Extension of project area to Painted Rock Dam
- Regulation of (constant) releases is necessary in many plan alternatives
- Public's desire for focus on River clean-up
- Public's opposition to "development" in the floodplain
- Refocus to hydraulically compatible land-use planning
- Possible stumbling block to planning effort caused by adjudication of the Salt/Gila River
- Inclusion and/or necessity of other members to the master planning effort
  - Environmental Protection Agency
  - Bureau of Land Management
  - Bureau of Reclamation
  - Public Member(s)



#### IV. Presentation of Alternatives

At the September meeting, the consultant will present five alternatives, four of which are master plans and one of which is to take no action. These alternatives are briefly described below. Attached behind the 22 documents, are more detailed descriptions of each. Very similar exhibits will be used at the September meeting.

To determine the framework of each of the four master plans, the consultant first formulated all of the planning issues that the Scoping Study uncovered. The issues were then grouped into separate planning-goals categories such as flood control, transportation, recreation, environment, aesthetics, water quality, and recharge.

The "moderate", "extensive", and "comprehensive" planning alternatives pursue issues in most or all of the categories, but at different levels of involvement.

**A. No Action** - The "No Action" discussion will focus on the consequences of developing no master plan for the Salt/Gila River. The inability to better mitigate the affects of recent flooding is an example of opportunities lost by not having a master plan in place.

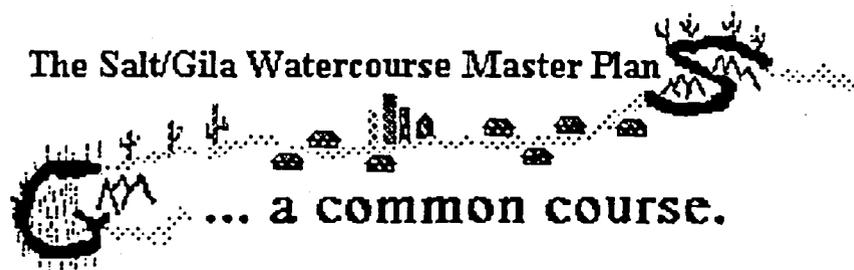
**B. Limited Master Plan** - The first master plan option is termed "Limited." Under this option, several planning issues are addressed in only one category. The category chosen was flood control. It may just as easily have been environment or recreation or any of the others. Since the scope of this plan is limited, it requires the participation of only one or several agencies. The limited master plan option has a low planning and implementation cost, but its limited scope tends to make it less attractive than any of the other three plans.

**C. Moderate Master Plan** - The second master plan alternative is termed "Moderate." Under this master plan, a "central authority" would implement some of the plan's components, but much of the control over many activities in the River remain with local jurisdictions. Most of the issues of each category are addressed. The ratio of benefits gained by master planning to the costs of planning and implementation are large, as in the first two alternatives, but a shorter planning schedule allows the benefits to be realized much earlier. This alternative also has significantly reduced implementation costs.

**D. Extensive Master Plan** - The third master plan option is termed "Extensive." It includes many more of the planning issues in each category than the "moderate" plan. Because the number of issues pursued in this plan, some of the authority of the local jurisdictions/agencies/entities is lost and replaced with an established central authority. This option serves to make a "showcase" of the River.

**E. Comprehensive Master Plan** - The last master plan alternative is termed "Comprehensive" and is, not surprisingly, the most costly and hardest to implement. It includes all of the planning issues of all of the planning-goals categories that Scoping Study uncovered. It would require the formation of a "super agency" that may have taxing powers to implement components of the plan.

## The Salt/Gila Watercourse Master Plan



and the super agency would possess a great deal of the regulatory powers and control over the River. The planning and implementation of this plan would require state and federal legislation in order to transfer regulatory and enforcement power of the plan's components from federal to local control. This option would make the greatest "showcase" of the River.

The four options for a master plan will take three to five or more years to develop, have a rough range of planning costs of \$2 million to \$20 million, have up to a twenty-year implementation period and rough implementation costs ranging from \$7 million to over \$75 million.

**F. Recommendation to Select Moderate Master Plan** - The Management Committee recommends that the Moderate Master Plan alternative be approved by the Executive Committee. If the Moderate option is chosen, the planning costs are roughly estimated to be in the range of \$4 to \$6 million over a two or three year planning schedule.

The primary reasons for recommending the moderate master plan option are because the plan:

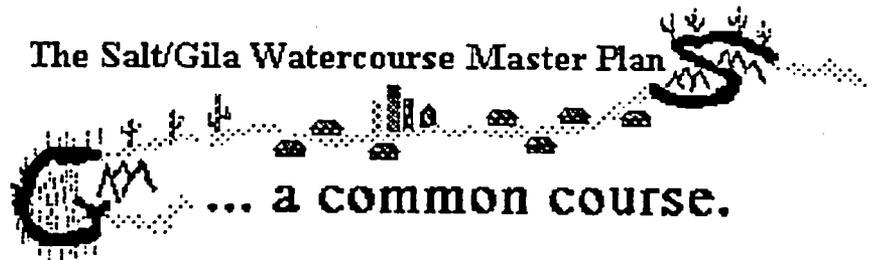
1. Has no requirement to change or create current laws.
2. Requires little loss of local control in the implementation of plan components.
3. A single agency can be designated to implement the master plan.
4. Has a shorter planning schedule which allows for implementation to begin earlier and in turn allows the
  - a. master plan's benefits to be realized more quickly.
  - b. master plan to be modified or updated sooner.
  - c. master plan to be expanded if benefits are adequately demonstrated.

The consultant will prepare a final scope of work report for the selected alternative. The report will detail the cost to plan and implement all of the issues associated with the alternative. The report can readily be converted to a scope of work for the master plan. Additional guidance will be required to better identify all components for which to estimate planning costs.

## VI. Commitments

**A. Financial** - In the final scope of work report, the consultant will include possible sources for funding the implementation cost. In order to fund the master plan itself; however, participation from the jurisdictions/agencies/entities represented on the Executive Committee and others will be necessary.

Attached behind the master plan alternatives exhibits are six Planning Costs Funding Schemes. Three of them involve a 30% County, 30% local jurisdictions/agencies/entities, 20% State, and 20% Federal funding distributions. For the other three schemes, the distributions are 50%, 20%, 15%, and 15%.



Schemes A1 and A2 distribute the planning costs among the 14 jurisdictions/agencies/entities represented on the Executive Committee only. Schemes B1 and B2 distribute the planning costs among the 20 jurisdictions/agencies/entities represented on the Management Committee. Schemes C1 and C2 combine the A and B schemes with several others.

**B. Other Contributions** - It may be possible to contribute to the master planning efforts in ways other than direct funding. Other assistance would include the assignment of staff to assist in planning, contribution of data, software, data base files or other information to assist in the development of the selected master plan alternative.

## VII. Remaining Schedule

If the agenda in the September meeting is completed, the Flood Control District Board of Directors will decide if the final scope of work report and Flood Control District's portion the funding for planning costs are appropriate and should be pursued.

When a scope of work for the master plan is finalized and the financial commitments are secured, the third major step of the planning process, the development of a master plan and an environmental document to support its implementation, can commence. The final scope of work report will be the basis of the scope of work for the contract to develop the actual master plan and supporting environmental document.

Enclosures: Reference Documents

## 4.0 DETAILED MASTER PLAN TASK DESCRIPTION

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The following detailed task descriptions were designed to provide the basis and assumptions for scoping of costs and estimating schedule requirements; with further refinement, they might also be used as the basis for preparing the long-term program Work Plan and for issuing consultant RFPs.

### **Phase I: Master Plan Scoping (11/92 - 2/94)**

Work tasks 1.0 through 8.0 have been completed with the acceptance of this Report.

### **Phase II-A: Program Organization (3/94 - 12/94)**

Task II-A-1: Determine Master Plan Participants and Designate/Create Master Plan Management Entity (3/94 - 12/98).

- Identify the jurisdictions and agencies who will be master plan Participants and the degree of participation desired by each.
- Develop and reach consensus on a Master Plan management structure.
- Identify Participants who have desire/capability to participate in the on-going management and oversight of the Master Plan process.
- Assign overall program management responsibility to a management entity (one, or a consortium of participants).
- Hire/assign program staff (3 full-time staff positions: Executive Director, Technical Manager, and Administrative support).
- Create/establish an overview or policy guidance group representing the Master Plan Participants (could be continuation of existing Executive and/or Management Committee structure).

Task II-A-2: Develop and execute cooperative agreement and Phase II funding commitments among Participants (3/94 - 9/94).

- Master Plan management entity develops draft cooperative agreement defining Participants' roles and responsibilities, including agreements for Phase II staff and resource commitments and in-kind services.
- Master Plan management entity develops draft Phase II funding commitment for each Participant, including consideration of agreements for staff and resource commitment and in-kind services.

- Master Plan Participants review and comment on draft agreement and funding commitment.
- Master Plan Participants execute cooperative agreement and funding commitment.

Task II-A-3: Delineate Master Planning Area (6/94 - 9/94).

- Final identification of 100-year floodplain, based on Baker study results, post-1992 floodplain re-evaluation, and the USACOE reconnaissance-level study of the Gila River from Gillespie Dam to Yuma..
- Define Master Planning Area according to interests of Participants (i.e., is it the floodplain, is it the floodplain squared to the nearest half-section, is it the floodplain and 1/2 mile, or is it the entire county).
- Determine Master Planning Area for any non-participating jurisdictions (if appropriate).

Task II-A-4: Complete FEMA-endorsed Floodplain Insurance Study for 72-mile reach of Salt-Gila Watercourse (original Master Plan Study Area) (1/91 - 12/95)

- FCD complete Floodplain Insurance Study, including 100-year floodplain delineation and USACOE computer-based floodplain model (in progress).
- Integrate Master Plan area data base into computer-based floodplain model.

Task II-A-5: Create on-going mechanism for public information and involvement (6/94 - 6/97).

- Select and execute contract with specialty consultant for Public Involvement.
- Develop a Public Information and Involvement Program and implementation schedule.
- Identify and appoint a community-based Master Plan Citizen Advisory Committee (CAC), through input received from public workshops and recommendations of Master Plan Participants.
- Maintain public information and involvement throughout Master Plan process (Phases II and III) through quarterly newsletters, quarterly CAC meetings, regular news releases.

Task II-A-6: Establish "quality of life" goals for Master Plan Area (6/94 - 9/94).

- Obtain guidelines from Participants regarding quality of life goals.
- Hold facilitated public information workshops to "sell" the Master Plan concept, provide information, and solicit public input into establishment of quality of life goals and early planning process.
- Establish specific quality of life goals to guide development of Master Plan content objectives.

Task II-A-7: Identify specific Master Plan content objectives (6/94 - 9/94).

- Meet with management entity Staff, CAC, Policy Guidance Group, and Public Involvement Consultant to define and prioritize Master Plan objectives and specify Master Plan content for funding planning.

Task II-A-8: Identify Potential Mitigation Banking and Environmental Enhancement Opportunities within Master Plan Study Area (6/94 - 9/94).

- Meet with environmental resource management agency staff; hold public meeting.
- Identify potential sites for mitigation banking programs within the study area.
- Identify opportunities for environmental enhancement within the study area.

Task II-A-9: Prioritize detailed Master Plan objectives for Phase II-B funding and for future development of Master Plan components (9/94 - 11/94).

Task II-A-10: Identify and select specialized Master Plan consultants for development of Master Plan, assistance with funding, and completion of NEPA compliance document (e.g., Programmatic EIS) and regulatory approvals (10/94 - 12/94).

#### **Phase II-B: Program Funding (12/94 - 12/95)**

Task II-B-1: Create detailed budget for remaining Master Plan Process (12/94 - 1/95).

- Integrate funding consultant into budgeting process.
- Revise scoping report tasks description, based on revised objectives.
- Refine estimated costs and schedule, for revised task.
- Review and revise (as appropriate) responsibilities for performance of work.

Task II-B-2/3: Identify and pursue potential external funding sources (12/94 - 8/95).

- Funding consultant to develop long-term financing strategy for remainder of Phase II and Phase III, with guidance from Participants.
- Contact agencies/organizations with grant programs (e.g., EPA).
- Develop relationships with state and federal legislative "champions" and agencies with budgeting authority to support project.
- Seek private matching fund opportunities to leverage grants/appropriations.

**Task II-B-4: Obtain external funding commitments (6/95 - 10/95).**

- Secure grants and execute funding agreements.
- Obtain firm appropriations from state legislature and US Congress for multi-year support (through Phase III).
- Execute cooperative agreements with supporting agencies (e.g. USACOE, ADEQ) for pass-through funding and in-kind service support.

**Task II-B-5: Obtain internal funding commitments (9/95 - 12/95).**

- Identify budgetary shortfalls (if any) resulting from insufficiency of external funding.
- Participants decide either to fund shortfall themselves or reduce scope/intensity of remaining program components.
- Create (or modify existing) cost allocation scheme among Participants.
- Participants make long-term commitment to fund (as necessary) remaining unfunded Phase II and Phase III tasks.
- Participants finalize long-term commitment of in-kind services in lieu of funding support (e.g. office space, staff)

**Phase II-C: Develop Conceptual Master Plan (6/94 - 12/97).**

**Task II-C-1: Establish Master Plan Data Base and Information Repository (6/94 - 12/95).**

- Review existing Annotated Bibliography for adequacy.
- Request copies of all relevant literature, studies, etc.
- Set up Data Base development and filing system.
- Establish Information Repository for use of staff, consultants, Participants, and public.

**Task II-C-2: Outline Master Plan Plan Elements (2/95 - 6/95).**

- Based on refined Plan objectives and funding availability, decide which Plan Elements need to be developed.
- Possible Plan Elements include:
  - Hydraulic Management
  - Natural Habitat
  - Open-Space
  - Recreation
  - Water Quality
  - Water Storage/Recharge
  - Economic Development

- Transportation
- Resource Exhaustion/Mining
- Commercial Development
- Residential Development
- Prepare detailed outline of Plan Elements needs to implement Master Plan

Task II-C-3: Develop Detailed Conceptual Plan and Plan Alternatives (Four Scenarios) (6/95 - 10/95).

- Based on input from Participants, public involvement, data reviews, funding availability, and expected technical components, prepare a detailed outline of Master Plan and up to three abstracts.

Task II-C-4: Determine NEPA Compliance Process and Permitting Requirements (7/95 - 1/96)

- Review and obtain commitment on NEPA compliance requirements.
- Identify probable NEPA Lead Agency
- Identify permits and regulatory reviews/approvals required from local, state, federal agencies.
- Design integrative NEPA and regulatory review approval process
- Obtain written concurrence of Lead Agency
- Schedule and cost estimate assumes that a Programmatic Environmental Impact Statement (PEIS) will be required, using alternative scenarios.
- Review Clean Water Act Section 404 requirements.
- Outline options and pros/cons for regulatory compliance strategy.
- Select regulatory compliance strategy.

Task II-C-5: Identify cumulative impacts and benefits of each alternative scenario. (1/96 - 7/96)

- Establish current and future allowable development scenario within Master Plan Area (baseline).
- Determine key environmental/social/economic issue areas to be analyzed; obtain public input.
- Project baseline conditions to common forecast year for each plan alternative.
- Identify cumulative effects of each alternative (both adverse and beneficial).
- Provide effect analysis for No Project scenario.

Task II-C-6: Complete NEPA documentation for Conceptual Master Plan and Alternatives.  
(1/96 - 6-97)

- Assumes that a Programmatic EIS will be required.
- Establish NEPA study area and scope of document.
- Select NEPA consultant (if not already accomplished).
- Issue Notice of Intent.
- Hold Scoping meetings (at least 4 locations).
- Prepare Plan of Action for Lead Agency.
- Develop detailed Project/Alternative Description.
- Complete baseline studies for relevant issue areas.
- Perform impact assessment for significant effects.
- Propose a framework to develop and implement mitigation measures for significant impacts.
- Prepare Draft and Final PEIS documents.
- Hold public hearings on Draft and Final PEIS.
- Lead Agency/management entity certify Final PEIS and adopt findings and mitigation plan.
- Complete any associated environmental reviews (e.g., NHPA Section 106 Programmatic Agreement).

Task II-C-7: Obtain Clean Water Act Section 404 General Permit for proposed Master Plan.  
(1/97 - 6/97)

- Determine appropriate type of 404 permit.
- Negotiate permit conditions with USACOE and USEPA.
- Complete any required additional documentation for General Permit.
- Promulgate General Permit to Participants for local coverage of Master Plan Area development.

Task II-C-8: Execute Memorandum of Understanding between Participants and other regulatory agencies giving general approval to any plan-conforming activities (e.g., USF&WS, AG&FD, ADOT). (1/97 - 6/97)

Task II-C-9: Revise Conceptual Master Plan. (6/97 - 9/97)

- Modify Conceptual Master Plan to conform to MOU and any permit conditions/limitations.
- Issue draft Master Plan to Participants and public.
- Participants review/revise land use and development plans to conform to Master Plan.

- Obtain final public input on draft Master Plan.

Task II-C-10/11: Obtain approval of final Master Plan and funding commitments for Phases III/IV. (9/97 - 12/97)

- Participants adopt Master Plan and incorporate provisions into local plans.
- Affirm content of Technical Plan Elements to be developed.
- Select specialized consultants to develop detailed Plan Elements.

**Phase III-A: Data Development and Application. (9/97 - 3/98)**

Task III-A-1/2: Review Master Plan Data Base and conduct any further studies needed to fill data gaps required for development of Plan Elements. (9/97 - 6/98)

Task III-A-3: Establish Data Base upkeep program among Participants and agencies. (1/98 - 3/98)

- Create uniform up-date methodology.
- Adopt common Data Base standard.
- Establish systematic upkeep requirements to support future Master Plan and Technical Element revisions.
- Develop uniform land use data base and regulatory review task force to ensure Master Plan compliance.

**Phase III-B: Prepare Plan Elements. (1/98 - 12/98)**

**(Note: Because topics for site-specific Plan Elements will only be defined following completion of Task II-C-2, definition of agency requirements and final adoption of the Master Plan (Task II-C-10), the possible Plan Elements listed below have been included as examples only and to estimate costs for Phase III funding. It is assumed that individual jurisdictions would tailor these elements to local uses, but the framework would remain the same and would meet the requirements of the General Permit or other permit scenarios. A maximum of 6 to 8 Plan Elements could probably be prepared within the \$2 million budget.)**

Task III-B-1: Revise / update / maintain watercourse hydraulic model for Master Plan Area based on MPF. (1/98 - 9/98)

- Establish operating parameters for model input/output.
- Define data requirements for model.

- Test and calibrate model using data from Task III-A.
- Enter data for additional 25-miles of the watercourse from Gillespie Dam to Painted Rock Reservoir.

Task III-B-2: Prepare Flood Control Plan Element (3/98 - 12/98).

Task III-B-3: Prepare Water Quality Plan Element (3/98 - 12/98).

Task III-B-4: Prepare Sediment Control/Aggregate Mining Plan Element (3/98 - 12/98).

Task III-B-5: Prepare Natural Resources Management Plan Element (3/98 - 12/98).

Task III-B-6: Prepare Recreational Uses Plan Element (3/98 - 12/98).

Task III-B-7: Prepare Cultural Resources Management Plan Element (3/98 - 12/98).

Task III-B-8: Prepare Agricultural/Irrigation Plan Element (emphasis on Gillespie Dam to Painted Rock Reservoir) (3/98 - 12/98).

**Phase III-C: Plan/Implement Environmental Enhancement Activities. (1/96 - 12/98)**

**(Note: At the specific request of the public and members of the Management Committee during the Plan Scoping Phase, a number of environmental enhancement activities and provisions for future environmental planning guidance were added to the scope of the Master Plan. The following tasks describe a series of possible environmental enhancements in order to provide a basis for cost and schedule estimation. Environmental enhancements (including the establishment of a Mitigation Banking Program) are intended to represent the outcome of previous planning activities, and can only begin after the specific Plan Elements are prepared. In actuality, most of these enhancements would probably be developed on an on-going basis in response to specific regulatory or funding agency requirements imposed as an outcome of Tasks II-B-4 and II-C-8, or from future public input arising out of Plan development activities; as such, they should be considered topical examples subject to further refinement and future revision.)**

Task III-C-1: Create Environmental Enhancements Task Force composed of participating agencies, Master Plan Participants, and key stakeholders in Master Plan Area to establish specific environmental improvement goals and to guide enhancement efforts. (1/96 - 9/98)

- Task III-C-2: Designate criteria for establishing Off-site Mitigation Management Areas within the Master Plan zone. (6/94 - 9/98) This represents the culmination of a 3-year effort begun as part of Task II-A-8.
- Task III-C-3: Prepare guidance document for landfill cleanup/remediation within Master Plan floodplain areas. (6/98 - 12/98)
- Task III-C-4: Prepare guidance document for creation, restoration, and management of Master Plan Area natural habitats and sensitive environmental areas. (6/98 - 12/98)
- Task III-C-5: Establish self-supporting Master Plan Area Mitigation Banking Program for off-site mitigation of impacts occurring elsewhere in Maricopa County. (1/96 - 12/98)
- Task III-C-6: Prepare guidance document for reclamation of aggregate mining areas within the Master Plan Area. (6/98 - 9/98)

**APPENDIX A**  
**CHRONOLOGY OF MASTER PLAN DEVELOPMENT HISTORY**

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# **SALT-GILA WATERCOURSE MASTER PLAN EXECUTIVE COMMITTEE MEETING INFORMATION PACKET**

## **I. Re-Introduction to the Watercourse Master Plan**

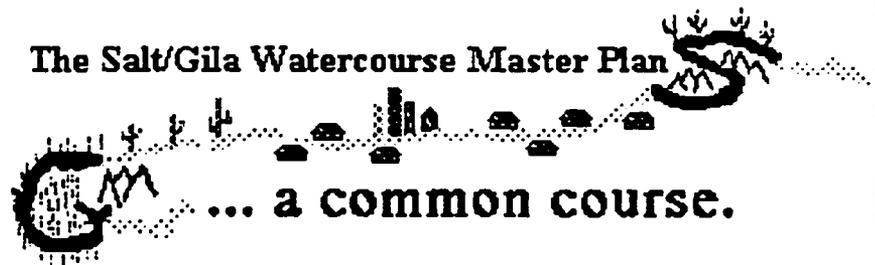
**A. Background** - While attending a conference in 1987, Dan Sagramoso, Chief Engineer and General Manager of the Flood Control District and District staff became aware of a massive riverine planning effort conducted by the Fort Worth District of the Corps of Engineers and the North Central Texas Regional Council of Governments regarding the Trinity River in the Dallas/Fort Worth area.

The Flood Control District then began to develop plans for implementing a similar planning effort for the Salt-Gila River. The necessity of undertaking the effort to master plan the Salt-Gila River is because current practices of regulatory actions taken by individual government agencies do not consider cumulative impacts.

Below is a chronological list of 22 significant documents, with a brief description of each, that have led up to the present step of the Scoping Study to present the alternatives and recommend the Moderate Master Plan. Attached are the complete documents for your further reference.

1. **RESOLUTION FCD 88-18** - Signed by the Flood Control District Board of Directors December 14, 1988 authorizing the Chief Engineer and General Manager to coordinate and develop information necessary for master planning the use and regulation of the floodplains in Maricopa County.
2. **Fact Sheet, February 1990** - The fact sheet discussed cumulative impacts, their effects, the current Federal funding constraints for attempting to develop a Federally-sponsored environmental master plan, and the Flood Control District's undertaking of the master plan at local expense.
3. **SENATE BILL 1277** - Approved by the Governor May 4, 1990, stating that if a district has completed a "watercourse master plan," and if the plan has been adopted by the Board or by any other jurisdiction in that river or drainage system, then the Board and the governing body of each jurisdiction may adopt and shall enforce uniform rules for that system within the jurisdiction.
4. **Fact Sheet, September 1990** - The fact sheet discussed the purpose and the need for Senate Bill 1277.
5. **RESOLUTION FCD 90-10** - Signed by the Flood Control District Board of Directors November 5, 1990 authorizing the initiation of a master plan study of the Salt-Gila Watercourse from Granite Reef Dam to Gillespie Dam.

The Flood Control District began the master planning process by initiating two separate contracts. The first, Contract FCD 90-59 was to produce aerial and topographic mapping, a flood delineation study, and a sediment transport study. The sediment transport portion of the contract was evaluated as being too costly and was eventually dropped from the scope. The contract was subsequently split into two parts; mapping (remaining as existing Contract FCD 90-59) and delineation (new Contract FCD 92-01). Both contracts were awarded to Michael Baker, Jr., Inc.



6. RESOLUTION FCD 91-13 - Signed by the Flood Control District Board of Directors September 3, 1991 authorizing a flood insurance study from Granite Reef Dam to Gillespie Dam not to exceed \$2,300,000 and be compatible with master plan study resource criteria. This resolution led to Contracts FCD 90-59 and FCD 92-01. (The total amount of both contracts is \$2,213,549).

The second contract was to provide a Watercourse Master Plan and Regional Environmental Impact Statement (REIS): Contract FCD 90-60. Dames & Moore was selected as the consultant for Contract FCD 90-60. In negotiating the contract it was realized that the development of a master plan and REIS required a very large financial commitment, an amount underestimated by District planning staff. As a result, the Flood Control District Board of Directors did not authorize the contract and directed the District to conduct a cost scoping analysis as an interim step, before initiating the more significant master plan contract.

7. RESOLUTION FCD 91-15 - Signed by the Flood Control District Board of Directors December 9, 1991 authorized and directed the Chief Engineer and General Manager to complete a cost scoping analysis for the Salt-Gila Watercourse Master Plan.

The scoping analysis, or study, is an interim step in the Watercourse Master Plan. It is intended to identify the tasks, efforts, and time schedule for conducting an implementable and enforceable master plan and produce a report which can readily be converted to the scope of work for the master plan. None of the actual tasks or efforts will be performed in the scoping study.

A Salt/Gila Watercourse Master Plan presentation was given by Dan Sagramoso and then project manager Doug Toy at the Association of State Floodplain Managers (ASFPM) Multi-Objective Workshop held at Pittsburgh in November 1991. A similar presentation was given by Stan Smith, Deputy Chief Engineer, at another ASFPM conference in the summer of 1992.

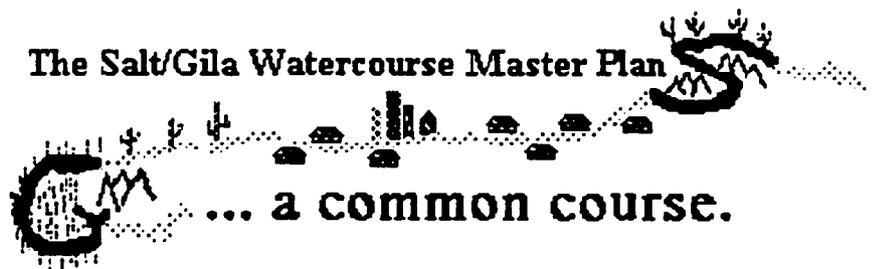
8. RESOLUTION FCD 91-17 - Signed by the Flood Control District Board of Directors February 18, 1992 authorized the Chief Engineer and General Manager to advance the Corps of Engineers up to \$10,000 to develop and negotiate an intergovernmental agreement which will detail the Corps' involvement with an REIS for the Salt-Gila Watercourse Master Plan.

9. On July 15, 1992, Woodward-Clyde Consultants, Inc. was selected as the Scoping Study consultant. The contract fee is \$98,000 and the notice to proceed occurred on November 16, 1992. The final scope of work is provided.

10. Letter mailed October 26, 1992 to the Corps of Engineers, accompanied with a \$10,000 warrant, requesting formal Corps participation in the Salt-Gila Watercourse Master Plan.

11. Management Committee meeting held November 24, 1992. Meeting agenda consisted of introduction of the Scoping Study consultant, the Management Committee's role in assisting the Study, the contract schedule, status on the flood insurance study, and discussion of the Memoranda of Agreement with the Corps of Engineers.





20. Management Committee meeting held June 29, 1993. Because the mission statement and the goals and objectives were not finalized at the June 1 meeting, the project manager conducted individual interviews with most members of the Management Committee from June 14 to June 21. The meeting agenda item for the June 29 meeting consisted of a review of the specific project issues as identified in the individual meetings, finalization of the goals and objectives, and preliminary discussions of the Executive Committee meeting.

21. Management Committee meeting held August 10, 1993. Meeting agenda consisted of presentation of master plan options and the format and agenda for the Executive Committee meeting.

22. Fact Sheet, August 1993 - The fact sheet discusses the project background, the finalized mission statement and goals and objectives, and also serves to address the misperceptions of the public meeting. The intent of the fact sheet is to put the work of the Scoping Study into perspectives at the time a decision is made in selecting a master plan option.

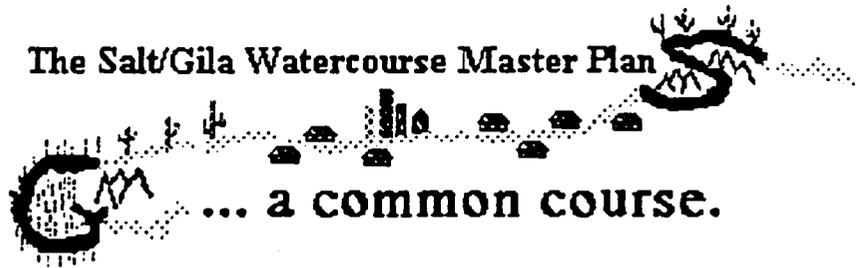
**B. Purpose** - The purpose, as originally conceived by the Flood Control District, was to develop and implement a master plan for the Salt/Gila River between Granite Reef Dam and Gillespie Dam, 72 miles, to better manage the River as a water conveying, economic, and environmental resource. The master plan would abandon the current practice of taking regulatory actions by individual government agencies without considering cumulative impacts. As mentioned, the flood insurance study is a component of the master plan and the Scoping Study is an interim step.

## II. Scoping Study

**A. Direction for the Scoping Study** - At the initiation of the Scoping Study, the goals to be addressed by the Salt/Gila Watercourse Master Plan, were comprised of three interrelated endeavors:

1. Defining the scoping tasks and efforts for the development of an implementable master plan;
2. Identifying acceptable land use alternatives that satisfy a balance of economic development, environmental values, and the maintenance of hydraulic continuity and floodplain management along the watercourse; and
3. Achieving a mechanism to facilitate Corps of Engineers permits of each accepted alternative in the master plan.

**B. Function of Management Committee** - The members of the Management Committee represent federal, state, and local jurisdictions, as well as industry and environmental interests. As such, the Committee was called upon in the first meeting to have strong involvement in data collection. The Scoping Study would not create new data, but rather rely on extensive existing data. The Committee would be expected to assist in data collection and also formulate the mission statement and the goals and objectives.



**C. Mission Statement and Goals & Objectives** - Within the first seven months of the Scoping Study contract, the master plan goals, as shown above, were evaluated and refined. The mission statement and the goals and objectives, as shown below, were finalized shortly after the June 29 Management Committee meeting. They are the result of data collection, Committee and consultant input, the public meeting on March 31 and the institutional, regulatory, economic, environmental, public, and social issues identified.

**MISSION STATEMENT** To develop a watercourse master plan for the Salt-Gila River that provides jurisdictions and entities along the watercourse with management tools to assess and manage the impacts of future development on the existing and planned natural and man-made environments.

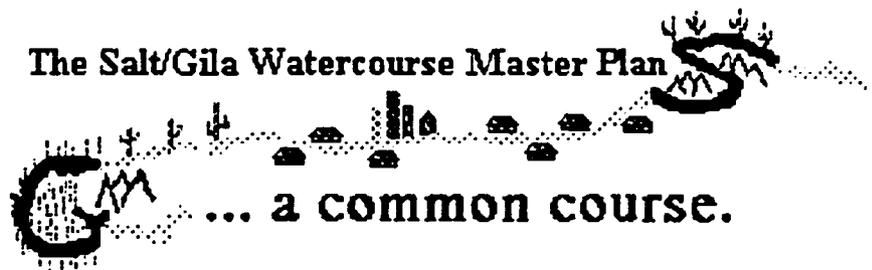
**GOALS AND OBJECTIVES**

1. To develop a hydraulic master plan that evaluates and manages the risks of loss of life and damages to property within the 100-year floodplain;
2. To identify existing conditions and assess future impacts of development on the natural and man-made environments;
3. To strive to develop consensus among the jurisdictions and entities on river management;
4. To maintain, protect, and enhance environmental quality and integrity;
5. To streamline and coordinate regulatory policies and procedures; and
6. To produce a master plan in the form that may be adopted by the Flood Control District Board of Directors and other jurisdictions along with uniform ordinances and/or regulations for enforcement.

Each of the six goals and objectives have components that are not listed here. Document 20 lists them completely.

**D. Master Planning Opportunities and Constraints** - The Scoping Study raised a number of issues and conditions that represent opportunities for improvement of the master plan if included. Other issues and conditions exist that may constrain or impede the master planning process if not obtained. Below, is a listing of issues and conditions that were raised.

- Extension of project area to Painted Rock Dam
- Regulation of (constant) releases is necessary in many plan alternatives
- Public's desire for focus on River clean-up
- Public's opposition to "development" in the floodplain
- Refocus to hydraulically compatible land-use planning
- Possible stumbling block to planning effort caused by adjudication of the Salt/Gila River
- Inclusion and/or necessity of other members to the master planning effort
  - Environmental Protection Agency
  - Bureau of Land Management
  - Bureau of Reclamation
  - Public Member(s)



#### IV. Presentation of Alternatives

At the September meeting, the consultant will present five alternatives, four of which are master plans and one of which is to take no action. These alternatives are briefly described below. Attached behind the 22 documents, are more detailed descriptions of each. Very similar exhibits will be used at the September meeting.

To determine the framework of each of the four master plans, the consultant first formulated all of the planning issues that the Scoping Study uncovered. The issues were then grouped into separate planning-goals categories such as flood control, transportation, recreation, environment, aesthetics, water quality, and recharge.

The "moderate", "extensive", and "comprehensive" planning alternatives pursue issues in most or all of the categories, but at different levels of involvement.

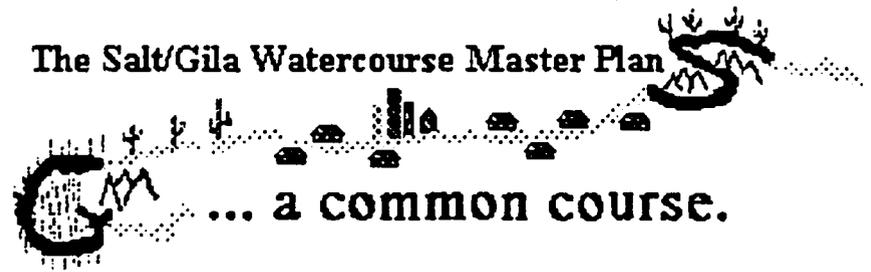
**A. No Action** - The "No Action" discussion will focus on the consequences of developing no master plan for the Salt/Gila River. The inability to better mitigate the affects of recent flooding is an example of opportunities lost by not having a master plan in place.

**B. Limited Master Plan** - The first master plan option is termed "Limited." Under this option, several planning issues are addressed in only one category. The category chosen was flood control. It may just as easily have been environment or recreation or any of the others. Since the scope of this plan is limited, it requires the participation of only one or several agencies. The limited master plan option has a low planning and implementation cost, but its limited scope tends to make it less attractive than any of the other three plans.

**C. Moderate Master Plan** - The second master plan alternative is termed "Moderate." Under this master plan, a "central authority" would implement some of the plan's components, but much of the control over many activities in the River remain with local jurisdictions. Most of the issues of each category are addressed. The ratio of benefits gained by master planning to the costs of planning and implementation are large, as in the first two alternatives, but a shorter planning schedule allows the benefits to be realized much earlier. This alternative also has significantly reduced implementation costs.

**D. Extensive Master Plan** - The third master plan option is termed "Extensive." It includes many more of the planning issues in each category than the "moderate" plan. Because the number of issues pursued in this plan, some of the authority of the local jurisdictions/agencies/entities is lost and replaced with an established central authority. This option serves to make a "showcase" of the River.

**E. Comprehensive Master Plan** - The last master plan alternative is termed "Comprehensive" and is, not surprisingly, the most costly and hardest to implement. It includes all of the planning issues of all of the planning-goals categories that Scoping Study uncovered. It would require the formation of a "super agency" that may have taxing powers to implement components of the plan.



and the super agency would possess a great deal of the regulatory powers and control over the River. The planning and implementation of this plan would require state and federal legislation in order to transfer regulatory and enforcement power of the plan's components from federal to local control. This option would make the greatest "showcase" of the River.

The four options for a master plan will take three to five or more years to develop, have a rough range of planning costs of \$2 million to \$20 million, have up to a twenty-year implementation period and rough implementation costs ranging from \$7 million to over \$75 million.

**F. Recommendation to Select Moderate Master Plan** - The Management Committee recommends that the Moderate Master Plan alternative be approved by the Executive Committee. If the Moderate option is chosen, the planning costs are roughly estimated to be in the range of \$4 to \$6 million over a two or three year planning schedule.

The primary reasons for recommending the moderate master plan option are because the plan:

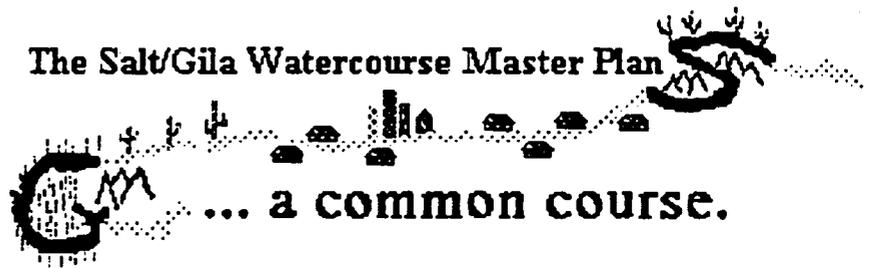
1. Has no requirement to change or create current laws.
2. Requires little loss of local control in the implementation of plan components.
3. A single agency can be designated to implement the master plan.
4. Has a shorter planning schedule which allows for implementation to begin earlier and in turn allows the
  - a. master plan's benefits to be realized more quickly.
  - b. master plan to be modified or updated sooner.
  - c. master plan to be expanded if benefits are adequately demonstrated.

The consultant will prepare a final scope of work report for the selected alternative. The report will detail the cost to plan and implement all of the issues associated with the alternative. The report can readily be converted to a scope of work for the master plan. Additional guidance will be required to better identify all components for which to estimate planning costs.

## VI. Commitments

**A. Financial** - In the final scope of work report, the consultant will include possible sources for funding the implementation cost. In order to fund the master plan itself; however, participation from the jurisdictions/agencies/entities represented on the Executive Committee and others will be necessary.

Attached behind the master plan alternatives exhibits are six Planning Costs Funding Schemes. Three of them involve a 30% County, 30% local jurisdictions/agencies/entities, 20% State, and 20% Federal funding distributions. For the other three schemes, the distributions are 50%, 20%, 15%, and 15%.



Schemes A1 and A2 distribute the planning costs among the 14 jurisdictions/agencies/entities represented on the Executive Committee only. Schemes B1 and B2 distribute the planning costs among the 20 jurisdictions/agencies/entities represented on the Management Committee. Schemes C1 and C2 combine the A and B schemes with several others.

**B. Other Contributions** - It may be possible to contribute to the master planning efforts in ways other than direct funding. Other assistance would include the assignment of staff to assist in planning, contribution of data, software, data base files or other information to assist in the development of the selected master plan alternative.

#### VII. Remaining Schedule

If the agenda in the September meeting is completed, the Flood Control District Board of Directors will decide if the final scope of work report and Flood Control District's portion the funding for planning costs are appropriate and should be pursued.

When a scope of work for the master plan is finalized and the financial commitments are secured, the third major step of the planning process, the development of a master plan and an environmental document to support its implementation, can commence. The final scope of work report will be the basis of the scope of work for the contract to develop the actual master plan and supporting environmental document.

Enclosures: Reference Documents

**APPENDIX B**  
**MASTER PLAN ALTERNATIVE APPROACHES**

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FIGURE A

NO-ACTION TOWARD MASTER PLAN DEVELOPMENT

Master Plan Features	Est. Planning Cost	Est. Planning Schedule	Advantages/Opportunities	Problems/Consequences	Cost of Failure to Implement Master Plan Process
No Action/No change from status-quo	\$ 0	--	<ul style="list-style-type: none"> <li>- No costly planning or coordination required to maintain status quo.</li> <li>- Doesn't require any institutional or regulatory changes.</li> </ul>	<ul style="list-style-type: none"> <li>- Continued degradation of physical environment.</li> <li>- Loss of economic opportunity and under-use of resource base.</li> <li>- Watercourse continues as an eyesore and "dumping ground" for LULUs.</li> <li>- Groundwater continues to be over-drafted and water quality deteriorates.</li> <li>- Cumulative impacts become progressively more severe over time.</li> <li>- Comprehensive, coordinated flood control management not possible in floodplain controlled by 12 different jurisdictions, with diverse standards.</li> <li>- Forgoes opportunity for "highest and best use" of floodplain area.</li> </ul>	Potentially tens of millions in ultimate costs for cumulative impacts, environmental cleanups, lost economic opportunities, and sub-optimized land uses.

FIGURE B

LIMITED MASTER PLAN CHARACTERISTICS

Master Plan Features	Est. Planning Cost	Est. Planning Schedule	Advantages/Opportunities	Problems/Consequences	Est. 20-yr. Cost
<ul style="list-style-type: none"> <li>- Designates FCD or Maricopa County to develop and maintain hydraulic model and flood control master plan.</li> <li>- Depends only on limited funding and support of local agencies.</li> <li>- Meets only flood control planning objectives.</li> <li>- Provides limited technical guidance and review of land use plans and resource management proposals from flood control perspective.</li> <li>- Offers no land use controls, environmental cleanups, or economic development opportunities within watercourse.</li> </ul>	<p>\$ 2 - \$ 3 Million</p>	<p>18 - 24 Months</p>	<ul style="list-style-type: none"> <li>- Implementation could result in greater influence and control over floodplain management issues.</li> <li>- Highly feasible.</li> <li>- Low cost and fast schedule would result in rapid achievement of limited benefits.</li> <li>- No change in local control or institutional/regulatory arrangements needed.</li> </ul>	<ul style="list-style-type: none"> <li>- Would affect only limited uses and resources.</li> <li>- Limited focus would provide only few benefits to interested parties and no real environmental improvements.</li> <li>- Most cumulative impacts would continue or only partially be reduced.</li> </ul>	<p>\$ 7 - \$10 Million (does not include any capital costs)</p>

FIGURE C

MODERATE MASTER PLAN CHARACTERISTICS

Master Plan Features	Est. Planning Cost	Est. Planning Schedule	Advantages/Opportunities	Problems/Consequences	Est. 20-yr Impl. Cost
<ul style="list-style-type: none"> <li>- Designates local agency (or combination) with limited power for master plan implementation.</li> <li>- Depends on cooperative agreements among Federal/state/local agencies.</li> <li>- Meets some objectives of many interested parties.</li> <li>- Provides technical guidelines for resource management.</li> <li>- Suggests land use planning goals and coordination procedures.</li> <li>- Some limited economic development opportunities.</li> <li>- Encourages environmental cleanup and restoration of the watercourse by others.</li> </ul>	<p>\$ 4 - \$ 6 Million</p>	<p>24 - 36 Months</p>	<ul style="list-style-type: none"> <li>- Benefits to many interested parties; some multi-purpose goals achieved.</li> <li>- Provides for the Salt-Gila Watercourse to become an economically viable, multi-use resource.</li> <li>- Little local control relinquished, thus making reaching consensus and executing agreements easier.</li> <li>- Relatively short planning period needed (2 - 3 years).</li> <li>- Less expensive to implement.</li> <li>- No curtailment of local control or land use enforcement; existing land use plans to be coordinated, not controlled.</li> <li>- Moderate up-front expenditures before implementation benefits realized.</li> </ul>	<ul style="list-style-type: none"> <li>- Strong support of interested parties required; depends on success of voluntary cooperation to achieve results.</li> <li>- May not achieve plan objectives unless most jurisdictions and agencies maintain long-term financial support and uniform enforcement policies.</li> <li>- Little improvement in physical environment; only some cumulative impacts eliminated.</li> <li>- Does not achieve "highest and best use" of floodplain resources potential.</li> <li>- Not sufficient value-capture potential created for plan to become financially self-sufficient.</li> </ul>	<p>\$ 15 - \$20 Million</p>

**FIGURE D  
EXTENSIVE MASTER PLAN CHARACTERISTICS**

Key Features	Est. Planning Cost	Est. Planning Schedule	Advantages/Opportunities	Problems/Consequences	Est. 20-yr Impl. Cost
<ul style="list-style-type: none"> <li>- Creates a Master Plan Management Agency with strong implementation power.</li> <li>- Grants control over some Federal and state permits to local agencies.</li> <li>- Meets many objectives of most interested parties.</li> <li>- Provides many technical management plan elements.</li> <li>- Supports uniform control over local land use planning.</li> <li>- Provides for many economic development opportunities.</li> <li>- Supports environmental clean-up and restoration of watercourse.</li> </ul>	<p align="center">\$ 7 - \$ 10 Million</p>	<p align="center">36 - 60 Months</p>	<ul style="list-style-type: none"> <li>- Some benefits for almost all interested parties; achieves many goals.</li> <li>- Transforms Salt-Gila Watercourse into a major regional asset and economically viable, multi-use resource.</li> <li>- Expensive, but would provide substantial economic benefits to region.</li> <li>- Some management plan elements could be implemented individually.</li> <li>- Results in some improvements to the physical environment and reduction or elimination of many cumulative impacts.</li> <li>- Would create a regional data base repository, but without GIS or mandatory updates.</li> </ul>	<ul style="list-style-type: none"> <li>- Difficult to reach consensus, enact legislation, and execute agreements.</li> <li>- Requires on-going support of most interested parties if diverse goals are to be reached.</li> <li>- Long planning period needed (3-5 years).</li> <li>- High, up-front expenditures before implementation benefits realized.</li> <li>- Attempt to reach consensus on planning goals could create institutional problems in region.</li> <li>- Reduces degree of local control and limits authority of land-use jurisdictions.</li> </ul>	<p align="center">\$ 30 - \$40 Million (does not include capital costs)</p>

FIGURE E

COMPREHENSIVE MASTER PLAN CHARACTERISTICS

Master Plan Features	Est. Planning Cost	Est. Planning Schedule	Advantages/Opportunities	Problems/Consequences	Est. 20-yr Impl .Cost
<ul style="list-style-type: none"> <li>- Creates "super agency" Management Authority for Plan Area with exclusive implementation powers.</li> <li>- Grants control over most Federal and state permits to local area authority.</li> <li>- Includes opportunities for all interested parties.</li> <li>- Provides for area-wide, comprehensive technical management plan elements.</li> <li>- Requires uniform control over land use planning and enforcement.</li> <li>- Provides for extensive economic development and "value capture" opportunities.</li> <li>- Mandates environmental clean-ups and restoration of watercourse.</li> </ul>	<p>\$ 15 - \$ 20 Million (minimum)</p>	<p>60 + Months</p>	<ul style="list-style-type: none"> <li>- Benefits to all interested parties; everyone "wins" something, achieves goals.</li> <li>- Showcases Salt-Gila Watercourse as environmental focus of region, vital economic component and an integral land-use system.</li> <li>- Requires strong and sustained support from all interested parties.</li> <li>- Results in substantial improvements to the physical environment and elimination of all cumulative impacts.</li> <li>- Could eventually become a "self-funded" program through value-capture mechanisms.</li> <li>- Would establish a regional GIS master data base, with mandatory updates incorporated.</li> </ul>	<ul style="list-style-type: none"> <li>- Very difficult to reach plan consensus, enact legislation, execute agreements; need to resolve many conflicting issues before proceeding.</li> <li>- Sources of funding must be guaranteed for long planning period; funding of "up-front" planning will be difficult.</li> <li>- Very high up-front planning costs before implementation benefits can be realized.</li> <li>- Could become a political "hot potato" to implement. Attempts to reach consensus on planning goals likely to create institutional problems nationally and within Arizona.</li> <li>- Very expensive, but would result in major economic benefits and "return-on-investment".</li> <li>- Curtails or eliminates local control of land use in Master Plan Area.</li> <li>- Master plan elements are integrated and mutually dependent; partial implementation not feasible.</li> </ul>	<p>\$ 75 Million + (does not include capital costs)</p>

**SALT-GILA WATERCOURSE MASTER PLAN SCOPING PROJECT  
MASTER PLAN TYPES/COMPONENTS**

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**A. NO ACTION (Status Quo)**

Regulatory Aspect

- No jurisdiction or agency, or combination of both, are currently responsible for coordinating watercourse management or planning.
- Competing (and often mutually exclusive) land use plans/activities have the potential to create cumulative impacts.
- 404 permits are issued by ACOE, with limited local review and no local authority; only EPA has veto authority.
- Land use plans, NPDES permits, CAA attainment responsibility rests with various jurisdictions and agencies; no formal mechanism for inter-agency coordination.

Institutional Aspect

- No formal mechanism for inter-jurisdictional coordination or planning ("every agency for itself").

Technical Aspect

- No watercourse-wide technical plans or comprehensive data available.
- Limited ability to develop long-term flood control plans and policies.
- Limited or uncontrolled water releases and groundwater recharge.

Social/Economic Aspect

- Uncoordinated, and often conflicting, use of Master Plan Area resources and land-use potential.
- Past and present land uses do (or have the potential to) contribute to degradation of Master Plan Area (i.e., landfills, aggregate mining).
- Portions of the Master Plan Area are currently viewed by some as aesthetically undesirable as a core of an urban region.

Environmental Aspect

- Current and continued potential for surface and groundwater quality degradation.
- Some activities in the Master Plan Area generate particulate matter, impacting air quality attainment standards throughout the region.
- No uniform or acknowledged environmental standards for current and future development.

**A. NO ACTION (Status Quo) (CONTINUED)**

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- Potentially severe long-term cumulative impacts will be difficult to control or avoid.

**SALT-GILA WATERCOURSE MASTER PLAN SCOPING PROJECT  
MASTER PLAN TYPES/COMPONENTS**

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**B. LIMITED MASTER PLAN**

Regulatory Component - \$0.1 Million

- Designation of the Flood Control District or Maricopa County to oversee development and maintenance of a unified hydraulic model and flood control master plan.
- Review of 404 permit applications by FCD/County prior to approval by USACOE.

Institutional Component - \$0.1 Million

- Recognition by affected jurisdictions of FCD/County authority to hydraulically plan and review activities within the Master Plan Area.
- Agreement with USACOE to allow FCD/County to review and comment on 404 permits within the Master Plan Area.
- FCD/County offers fee-for-service reviews of local land use and resource management plans.

Technical Component - \$1.8 Million

- Develop a comprehensive flood control and hydraulic management plan element for the Master Plan Area, including creation and maintenance of a watercourse hydraulic model.
- Provide technical guidance and assistance to affected jurisdictions and agencies regarding acceptable land uses, water quality, sediment control, sand and gravel removal operations, recreational uses, natural resource uses within the Master Plan Area.

Social/Economic Component - \$0.2 Million

- FCD/County will assist and support jurisdictions and agencies within the Master Plan Area in hydraulic master plan implementation.
- Design and implement limited public participation program that includes information, education, and involvement opportunities in the hydraulic master planning and implementation process.

Environmental Component - \$0.1 Million

- Flood Control District will adopt and enforce environmental standards for flood control projects and review other floodplain projects for environmental suitability.

## B. LIMITED MASTER PLAN (CONTINUED)

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### Planning Issues

- The Limited Master Plan is highly feasible, but would affect only limited uses and resources within the watercourse, (mostly in coordinated flood control management).
- Costs and schedule for planning (18 to 24 months) would result in rapid achievement of limited benefits.
- Little coordinations or approvals of other agencies or land-use jurisdictions would be required.

### Estimated Plan Cost

- \$2 to \$3 Million.

### Estimated Plan Schedule

- 18 to 24 Months.

### Implementation Consequences

- Adoption and implementation of a Limited Master Plan would give FCD/County greater influence and control over floodplain management.
- Limited focus of plan would provide few benefits to interested parties (other than flood control improvement) and would have little effect in improving the environment and reducing cumulative impacts.
- Virtually no change to local control and authority would result from implementation of the Limited Master Plan.

### Estimated 20-year Implementation Costs

- \$7 to \$10 Million.

**SALT-GILA WATERCOURSE MASTER PLAN SCOPING PROJECT  
MASTER PLAN TYPES/COMPONENTS**

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**C. MODERATE MASTER PLAN**

Regulatory Component - \$1.6 Million

- Designate an existing Maricopa County agency or group of agencies to serve as the Salt-Gila Master Plan management entity, with limited regulatory and permitting powers.
- Obtain limited local 404 permitting and monitoring authority for the management entity through the Letter of Permission process; enforcement would remain with existing agencies.
- Complete formal NEPA review and compliance via an EA or focused EIS.
- Create a framework for close coordination of land use planning between jurisdictions within the Master Plan Area; the management entity would have oversight and review responsibility, but no authority to mandate compliance.

Institutional Component - \$0.2 Million

- Execute a cooperative master plan agreement among most affected jurisdictions and agencies, but enforcement authority would be retained by each jurisdiction or agency.
- Create a framework for planning participation and support of key local public interest groups (Sierra Club, Audubon Society, Chambers of Commerce, property owners).

Technical Component - \$2.0 Million

- Develop a comprehensive flood control and hydraulic management plan element for the Master Plan Area, including creation and maintenance of a watercourse hydraulic model.
- Develop uniform water quality guidelines for discharge, recharge, and withdrawals by jurisdictions and agencies within the Master Plan Area.
- Develop uniform guidelines for sedimentation control and aggregate management by affected jurisdictions and agencies within the Master Plan Area.
- Develop uniform recreation management guidelines for use by jurisdictions and agencies within the Master Plan Area.
- Develop natural resource management guidelines for use by jurisdictions and agencies within the Master Plan Area.
- Encourage sharing of regional planning and environmental information among jurisdictions and agencies within the Master Plan Area; create a document repository for relevant information, but no master data base or GIS updates.

## C. MODERATE MASTER PLAN (CONTINUED)

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### Social/Economic Component - \$0.5 Million

- Investigate potential funding sources and levels needed to support Moderate Master Plan preparation and implementation.
- Design and implement moderate public participation program that includes information, education, and involvement opportunities in the planning and implementation process.
- Suggest quality of life goals to be met within the Master Plan Area.
- Suggest opportunities for investigation, preservation, and recognition of historical and cultural resources within the Master Plan Area.

### Environmental Component - \$0.4 Million

- Encourage other agencies to accelerate mandatory cleanup of landfills, hazardous wastes, and other environmentally degrading "hot spots" within the Master Plan Area.
- Encourage other agencies to create, restore, and manage natural habitat zones in non-conflicting portions of the Master Plan Area.
- Encourage other agencies to identify, create, and manage offsite mitigation opportunities within the Master Plan Area.
- Identify cumulative environmental impacts within the Master Plan Area.
- Encourage the establishment of a streamlined environmental review process within the Master Plan Area.
- Identify opportunities for wildlife enhancement and recreational "ecotourism" within the Master Plan Area.
- Encourage reclamation of aggregate mining areas and other changing land uses within the Master Plan Area.
- Create an awareness of environmental impacts of upstream users/jurisdictions on downstream users/jurisdictions.

### Planning Issues

- A Moderate Master Plan would be more feasible than a Comprehensive or Extensive Master Plan and it would be easier to reach consensus and execute agreements covering regulatory and institutional issues since less local authority would be relinquished.
- A Moderate Master Plan would require a lesser degree of political, public, and funding commitment and agency support than the Comprehensive or Extensive Plans.
- A relatively short period (2 to 3 years) would be required to complete the planning process.
- Developing and adopting a Moderate Master Plan would involve lower up-front costs before benefits of implementation can be determined.
- There would be no enforcement authority for implementation of a Moderate Master Plan.

## C. MODERATE MASTER PLAN (CONTINUED)

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### Estimated Planning Cost

- \$4.0 to \$6.0 Million.

### Estimated Planning Process Schedule

- 24 to 36 months.

### Implementation Consequences

- Adoption and implementation of a Moderate Master Plan would identify the potential for the Salt-Gila Watercourse to become the center of the region as an economically viable multi-use resource, but would offer few economic development incentives.
- Even limited implementation would provide some benefits to most interested parties and result in improvements to the environment and reduction of cumulative impacts.
- A Moderate Master Plan would not curtail local control and authority (i.e., city and county authority) within Master Plan Area; costs of implementation locally controlled.
- Management plan elements could be implemented individually according to priorities set by local jurisdictions.
- The Moderate Master Plan would not be financially self-sufficient, nor would it achieve "highest and best use" objectives.

### Estimated 20-year Implementation Costs (exclusive of capital costs)

- \$15 to \$20 Million.

## SALT-GILA WATERCOURSE MASTER PLAN SCOPING PROJECT MASTER PLAN TYPES/COMPONENTS

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### D. EXTENSIVE MASTER PLAN

#### Regulatory Component - \$3.6 Million

- Create a Salt-Gila Master Plan Management Agency through local/state legislation, with limited independent power for planning, implementation, and enforcement.
- Obtain local 404 permitting, monitoring, and enforcement authority for the Management Agency through region-wide Letter of Permission process.
- Complete formal NEPA review and compliance via a Regional EIS.
- Create model land use ordinances for adoption by local jurisdictions within the Master Plan Area.
- Grant limited enforcement authority over non-conforming land uses within the Master Plan Area to the Management Agency.

#### Institutional Component - \$0.5 Million

- Execute master management and implementation agreement among **all** affected jurisdictions granting permitting, monitoring, and enforcement authority to the Management Agency.
- Execute MOUs with involved Federal agencies (USEPA, USACOE).
- Execute MOAs with involved Arizona state agencies (ADEQ, ADOT, ADGF).
- Develop targeted release plans with SRP regarding seasonal releases to the Salt-Gila Watercourse.
- Create a framework for planning participation and support of key local public interest groups (Sierra Club, Audubon Society, Chambers of Commerce, property owners).

#### Technical Component - \$3.4 Million

- Develop a comprehensive flood control and hydraulic management plan element for the Master Plan Area, including creation and maintenance of watercourse model.
- Develop a water release extraction and groundwater recharge management plan element for the Master Plan area.
- Develop water quality management plan element for discharge, recharge, and withdrawals within the Master Plan Area.
- Develop a sedimentation control and aggregate management plan element for the Master Plan Area.
- Develop a recreation management plan element for the Master Plan Area.
- Develop a natural resource management plan element (including habitat enhancement, restoration, and maintenance) for the Master Plan Area.
- Develop a cultural resource management plan element for the Master Plan Area.

## D. EXTENSIVE MASTER PLAN (CONTINUED)

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- Develop and maintain a limited regional planning and environmental management database.

### Social/Economic Component- \$0.7 Million

- Identify, investigate, and seek funding sources at levels needed to support extensive master plan preparation and implementation.
- Design and implement extensive public participation program which includes information, education, and involvement opportunities in the planning and implementation process.
- Identify economic development and value capture zones within the Master Plan Area as partial funding mechanisms.
- Identify quality of life goals to be met within the Master Plan Area.
- Identify opportunities for expanded commercial, residential, and recreational development within the Master Plan Area.
- Identify regional transportation and infrastructure corridors within the Master Plan Area for use of other utility and transportation planning agencies.
- Identify opportunities for investigation, preservation, and recognition of historical and cultural resources within the Master Plan Area.

### Environmental Component - \$0.9 Million

- Support and assist other agencies with mandatory cleanup of landfills, hazardous wastes, and other environmentally degrading "hot spots" within the Master Plan Area.
- Support and assist other agencies with the creation, restoration, and management of natural habitat zones within the Master Plan Area.
- Support and assist other agencies with the identification, creation, and management of offsite mitigation opportunities within the Master Plan Area.
- Identify and compensate for cumulative environmental impacts within the Master Plan Area.
- Support the development of guidelines for a streamlined environmental review process to be implemented local jurisdictions and agencies within the Master Plan Areas.
- Identify opportunities for wildlife enhancement and recreational "ecotourism" within the Master Plan Area.
- Require and monitor reclamation of aggregate mining areas and other changing land uses within the Master Plan Area.
- Create an awareness of environmental impacts of upstream users/jurisdictions on downstream users/jurisdictions.

## D. EXTENSIVE MASTER PLAN (CONTINUED)

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### Planning Issues

- An Extensive Master Plan may not be feasible from many standpoints, but primarily it will be difficult to reach consensus, enact legislation, and execute agreements in the regulatory and institutional areas.
- An Extensive Master Plan would require a great deal of political, public, and funding commitment and agency support.
- A long planning period (3 to 5 years) would be required to complete the planning process.
- Developing and adopting an Extensive Master Plan would involve high, up-front expenditures before benefits of implementation can be determined.

### Estimated Planning Cost

- \$8 to \$12 Million.

### Estimated Planning Process Schedule

- 36 to 60 months.

### Implementation Consequences

- Adoption and implementation of an Extensive Master Plan would showcase the Salt-Gila Watercourse as the center of the region and as an economically viable, multi-use resource.
- Implementation would provide benefits to almost all interested parties, with improvements to the environment and reduction of cumulative impacts.
- Management plan elements could be implemented individually according to prioritization or funding availability.
- An Extensive Master Plan would significantly curtail local control and authority (i.e., city and county authority) within Master Plan Area.
- Implementation of an Extensive Master Plan would be very expensive and would require local and state funding commitments even though local and state authority over priorities, schedule, and budget could be limited.

### Estimated 20-year Implementation Costs (exclusive of capital expenditures)

- \$30 to \$40 Million (minimum, depending on how extensive program ultimately becomes).

**SALT-GILA WATERCOURSE MASTER PLAN SCOPING PROJECT  
MASTER PLAN TYPES/COMPONENTS**

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**E. COMPREHENSIVE MASTER PLAN**

Regulatory Component - \$8.8 Million

- Pass special federal/state legislation to create a Salt-Gila Management Authority with extensive planning, implementation, and enforcement powers.
- Obtain complete local 404 permitting, monitoring, and enforcement authority (via General Permit) from ACOE/EPA for the Management Authority.
- Assign coordinated NPDES and stormwater permitting authority and monitoring responsibility for water quality standards in watercourse to Management Authority.
- Complete formal NEPA review and compliance via comprehensive Program EIS (with regional database) and grant responsibility for NEPA conformity reviews within the Master Plan Area to the Management Authority.
- Promote attainment of Phoenix area Clean Air Act air quality standards through development of particulate control measures within the Master Plan Area.
- Create relatively uniform, mandatory land use ordinances within the Master Plan Area and grant enforcement responsibility to Management Authority.

Institutional Component - \$0.9 Million

- Centralize responsibility for Master Plan management, implementation, and enforcement among all affected jurisdictions and agencies into the Management Authority.
- Execute MOUs with BLM, USEPA, USACOE, USFWS, and other Federal agencies giving Management Authority responsibility for coordination on Federal issues.
- Execute MOAs with Arizona state agencies (e.g., ADEQ, ADGF, ADOT, ADSL, SHPO) giving state and local coordination responsibility to the Management Authority.
- Execute Master Plan implementation agreement among local agencies (FCD, SRP, MAG,

## E. COMPREHENSIVE MASTER PLAN (CONTINUED)

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- MCDOT, Parks and Recreation) granting responsibility to Management Authority.
- Create framework for planning participation and support by key local public interest groups (Sierra Club, Audubon Society, Chambers of Commerce, property owners).
- Execute agreements with SRP regarding seasonal releases into Salt River drainages.
- Establish Master Plan Area data base agreement survey all affected entities, with responsibility shared for data base management and updating.

### Technical Component - \$5.2 Million

- Develop a comprehensive flood control and hydraulic management plan element for the Master Plan Area, including creation and maintenance of watercourse model.
- Develop a water release extraction and groundwater recharge management plan element for the Salt-Gila Watercourse within the Master Plan Area.
- Develop a water quality management plan element for discharge, releases, and withdrawals within the Master Plan Area.
- Develop a sedimentation control and aggregate management plan element for the Master Plan Area.
- Create a comprehensive land use management plan element for the Master Plan Area.
- Develop a comprehensive recreational management plan element for the Master Plan Area.
- Develop a comprehensive natural resource management plan element (including habitat enhancement, restoration, and maintenance) for the Master Plan Area.
- Develop a comprehensive Cultural Resource Management Plan (to comply with NHPA Section 106) for the Master Plan Area.
- Develop and maintain a GIS-based comprehensive regional planning and environmental management database.

### Social/Economic Component - \$1.0 Million

- Investigate, develop, seek, and obtain appropriate levels of funding to support comprehensive master plan preparation and implementation.
- Design and implement a comprehensive public participation program which includes information, education, and involvement opportunities in the planning and implementation process.

## E. COMPREHENSIVE MASTER PLAN (CONTINUED)

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- Create mandatory economic development and value capture zones as partial funding mechanisms within the Master Plan Area.
- Establish quality of life goals to be met within the Master Plan Area.
- Provide opportunities for expanded commercial, residential, and recreational development within the Master Plan Area.
- Enhance regional transportation and infrastructure network through designation of corridors within the Master Plan Area for high speed arterials and linear infrastructure.
- Provide for investigation, preservation, and recognition of historical and cultural resources within the Master Plan Area.
- Expand regional economic base and employment opportunities through plan implementation.

### Environmental Component - \$1.4 Million

- Supervise mandatory cleanup of landfills, hazardous waste, and other environmentally degrading "hot spots" within the Master Plan Area.
- Provide for creation, restoration, and management of natural habitat zones within the Master Plan Area.
- Identify, create, and manage, within the Master Plan Area, multiple types of offsite mitigation opportunities for unavoidable environmental impacts occurring elsewhere (e.g., mitigation banks).
- Identify and compensate for cumulative environmental impacts within the Master Plan Area (particularly including those not associated with the master plan process).
- Establish an expedited environmental review process within the Master Plan Area to prevent, minimize, and mitigate adverse environmental impacts while streamlining regulatory and permit reviews during Master Plan implementation.
- Create opportunities for wildlife enhancement and recreational "ecotourism" within the Master Plan Area.
- Require and monitor reclamation of aggregate mining and other changing land uses (landfills, industrial sites, roadways) within the Master Plan Area to maximize environmental improvement opportunities.
- Create an awareness of environmental impacts of upstream users / jurisdictions on downstream users/jurisdictions through review of all development proposals within the Master Plan Area.

## **E. COMPREHENSIVE MASTER PLAN (CONTINUED)**

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### Planning Issues

- A Comprehensive Master Plan may not be feasible from many standpoints, but primarily it will be difficult to reach consensus, enact legislation, and execute agreements in the regulatory and institutional areas.
- A Comprehensive Master Plan will require enormous political, public, and economic commitment and agency support.
- Sources of guaranteed funding for a planning period of 5 to 6 years must be identified and secured.
- A long timeframe (5 to 6 six years) will be required to complete the planning process for a Comprehensive Master Plan.
- Developing and adopting a Comprehensive Master Plan would involve high, up-front expenditures before benefits of implementation can be determined.

### Estimated Planning Cost

- \$15 to \$20 Million (minimum).

### Estimated Planning Process Schedule

- 60 months (minimum).

### Implementation Consequences

- A Comprehensive Master Plan incorporates and addresses virtually all of the issues, concerns, and preferences identified to date as part of the Master Plan Scoping process.
- Successful adoption and implementation of a Comprehensive Master Plan would showcase the Salt-Gila Watercourse as the center of the region and as an economically viable, multi-use resource.
- Implementation of a Comprehensive Master Plan would provide benefits to all interested parties, with improvements to the environment and reduction of cumulative impacts.
- A Comprehensive Master Plan would curtail, or even eliminate, local control and authority (i.e., city and county authority) within Master Plan Area.

## E. COMPREHENSIVE MASTER PLAN (CONTINUED)

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- Implementation of a Comprehensive Master Plan would be very expensive and would require local and state funding commitments even though local and state authority over priorities, schedule, and budget could be limited.

### Estimated 20-year Implementation Costs (exclusive of capital expenditures)

- \$75+ Million (depending on how extensive overall program ultimately becomes).