

KB

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 94-48

ADOPTION OF REVISED
WATER RECLAMATION LOAN PROGRAM GUIDELINES

WHEREAS:

1. The Clean Water Bond Law of 1984 and the Clean Water and Water Reclamation Bond Law of 1988 were passed by the voters in 1984 and 1988, respectively;
2. These bond laws provide funds for State loans for water reclamation projects;
3. The State Water Resources Control Board (State Water Board) adopted revised policies and procedures on April 20, 1989 to administer the Water Reclamation Loan Program to implement these bond laws;
4. The State Water Board adopted the "Water Reclamation Loan Program Guidelines" on September 21, 1989 to assist State Water Board staff in their review of loan applications under the Water Reclamation Loan program;
5. The State Water Board administers the State Revolving Fund Loan Program;
6. On January 21, 1993, the State Water Board adopted the "Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities", which included funding for water reclamation projects for water supply purposes and incorporated the "Water Reclamation Loan Program Guidelines" for use on water reclamation projects; and
7. The staff has proposed revisions to the guidelines, in regard to reclaimed water user assurances, eligible capacity, and project changes and other revisions to improve clarity.

THEREFORE BE IT RESOLVED THAT:

The State Water Board adopts the proposed revised "Water Reclamation Loan Program Guidelines", for use in the Water Reclamation Loan Program and the State Revolving Fund Loan Program.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on June 16, 1994.


Maureen Marché
Administrative Assistant to the Board

ATTACHMENT

California State Water Resources Control Board
Office of Water Recycling

WATER RECLAMATION LOAN PROGRAM GUIDELINES

September 1989^a
Draft: June 3, 1994^a

I. INTRODUCTION

The Water Reclamation Loan Program (WRLP) provides low interest loans to local agencies to design and construct water reclamation projects. The program is administered by the Office of Water Recycling of the State Water Resources Control Board (State Board SWRCB). The purpose of the program is to develop cost-effective water reclamation projects that which will augment water supplies. This purpose is achieved by providing low interest loans to local agencies to lower the cost of reclaiming and reusing treated wastewater to local agencies and water customers. For the purposes of the loan program, water reclamation is defined as "Water reclamation" is used in this document in its general sense to mean the process of treating wastewater to produce water for beneficial use, the storage and distribution of reclaimed water to the place of use, and the actual use of reclaimed water. The specific types of water reclamation facilities that are fundable under this program are explained in these guidelines. The loan program is administered by the State Water Board's Office of Water Recycling. The purpose of these guidelines is to describe the loan program's legal requirements, policies and procedures, and to provide guidance to SWRCB staff on project planning and monetary analysis.

Funding for the program is provided by two bond laws described below. Water reclamation projects are also funded by the SWRCB through the State Revolving Fund (SRF). These guidelines are also applicable to the SRF for water reclamation projects intended for water supply purposes. In addition to these guidelines, the "Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities" also applies to agencies applying for an SRF loan. Because of some differences in the laws and policies governing the WRLP and SRF, an SRF applicant should refer to "State Revolving Fund Loan Program Funding for Water Reclamation Projects." (Refer to Appendix B to obtain other SWRCB publications related to these programs.)

These guidelines apply to all projects that have not awarded construction contracts as of June 16, 1994. The provisions of these guidelines dealing with mandatory use ordinances for reclaimed water market assurances do not apply to agencies where their ordinances have received approval for the current loan application prior to June 16, 1994.

^a These guidelines were adopted by the State Water Resources Control Board on 21 September 1989 June 16, 1994

A. Clean Water Bond Law of 1984

A Water Reclamation Account was established under the Clean Water Bond Law of 1984 (1984 Bond Law) which authorized up to \$25 million for loans to municipalities to assist in the design and construction of water reclamation projects. Repayments of principal and interest are returned to the Water Reclamation Account to make additional loans. Also, the first \$30 million in principal and interest repaid for loans for wastewater facilities from the Clean Water Construction Grant Account, provided for in the 1984 Bond Law, will be deposited in the Water Reclamation Account.

Loans for water reclamation projects can be for a period of up to 25 years at an interest rate equal to 50 percent of the rate paid by the State on the most recent sale of state general obligation bonds. A moratorium on payments of principal and interest is not permitted. No single project may receive more than a \$10 million loan from this program. Loans can cover any part of a project up to 100 percent of project design and construction costs.

B. Clean Water and Water Reclamation Bond Law of 1988

Up to \$30 million ~~is~~ was initially available under the Clean Water and Water Reclamation Bond Law of 1988 (1988 Bond Law) for loans to local public agencies to aid in the design and construction of water reclamation projects. In addition, the SWRCB has exercised authority under the 1988 Bond Law to transfer an additional \$10 million into the Water Reclamation Account. "Local public agencies" do not include state agencies, which are included in the 1984 Bond Law as part of "municipalities". Loan repayments from these funds do not become part of a revolving fund as is the case of the 1984 Bond Law.

The loan provisions are the same as for the 1984 Bond Law with the exceptions that the maximum loan period is 20 years instead of 25 years and no maximum loan amount per project is specified.

It is the policy of the ~~State Board~~ SWRCB that loans from the Water Reclamation Loan Program shall be provided to cover 100 percent of eligible costs. No single project may receive more than \$5 million from the ~~State Board~~ SWRCB.

C. General Eligibility

The general basis of eligibility of a water reclamation project is established in the two bond laws by the definitions of "eligible water reclamation project", which are provided in the Definitions Section below. Projects for reclaiming ground water, including desalting and nitrate removal projects, are eligible if the water to be treated has become unusable primarily because of human activities.

As stated more specifically in Section VIII, the capacity of a project eligible for a loan is that capacity that can be used within nine years of completion of construction. However, pump station wet wells and pipelines can have a capacity of up to twenty years.

Water conservation is not fundable under this program. However, conservation loans may be available, for which some water reclamation projects may qualify,

under a program which is administered by the Department of Water Resources. There may be some projects that incorporate both reclamation and conservation features. Joint funding under both loan programs is permissible.

The purpose ~~The objective~~ of the Water Reclamation Loan Program is ~~to provide~~ achieved by providing financial assistance to eligible water reclamation projects. Generally, available funds will be committed to projects for which facilities planning is complete, provided the project meets the loan program requirements and is ready to proceed. However, the ~~State Board~~ SWRCB reserves the right to manage the program to achieve the best use of loan funds. For example, the ~~State Board~~ SWRCB may reserve funds for projects deserving special consideration or offer partial loans to achieve the maximum use of available loan funds.

It is the obligation of all loan applicants to comply with the California Environmental Quality Act (CEQA). Separate guidelines have been issued to describe these requirements. The ~~State Board~~ SWRCB cannot authorize a loan until the CEQA process is complete. The ~~State Board~~ SWRCB must be notified immediately of any change in the project after completion of the CEQA process or after concept approval by the ~~State Board~~ SWRCB. Such changes may result in the need to revise CEQA documents.

D. Definitions

The following definitions are key to understanding the Water Reclamation Loan Program:

Award of Construction Contract

The formal approval of selection of a construction contractor by the governing board of the agency.

Completion of Construction

The date, as determined by the Division of Clean Water Programs after consultation with the loan recipient, that the construction of the project is substantially complete.

Construction Financing Plan

The demonstration of the financial capability to design and construct a project.

Cost-Effectiveness Analysis

An analysis to determine which water development project, including water reclamation, will result in the minimum total resources cost (opportunity cost) over time to meet the project objectives, including local, state and federal requirements.

Economic Analysis

The procedure to determine the total monetary costs and benefits of all the resources committed to a project regardless of who in the society contributes them or who in the society receives the benefits.

Eligible Water Reclamation Project

A water reclamation project which is cost-effective when compared "to the development of other new sources of water" (1984 Bond Law) or "with the cost of alternative new freshwater supplies" (1988 Bond Law) and for which no federal assistance is currently available. These projects or activities shall comply with applicable water quality standards, policies, and plans.

Financial Analysis

The procedure to determine financial feasibility through the allocation of costs and benefits amongst project purposes and participants and the determination of cash flow of expenses and revenues over time.

Local Public Agency

Any city, county, district, joint powers authority, or any other local public body or political subdivision of the state created by or pursuant to state law and involved with water or wastewater management (based on 1988 Bond Law).

Municipality

Municipality shall have the same meaning as in the federal Clean Water Act (33 U.S.C. Sec. 1251 et. seq.) and shall also include the state or any agency, department, or political subdivision thereof (based on 1984 Bond Law).

Planning Period

The period over which a water development project is evaluated for cost effectiveness. This period is not necessarily the same as the useful lives of the facilities under consideration. The planning period begins with the system's initial operations and is defined to be 20 years for the Water Reclamation Loan Program.

Reclaimed Water

Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur. (Based on California Water Code, Section 13050(n).)

Revenue Program

The demonstration of the financial feasibility of a project for the period after operation has begun.

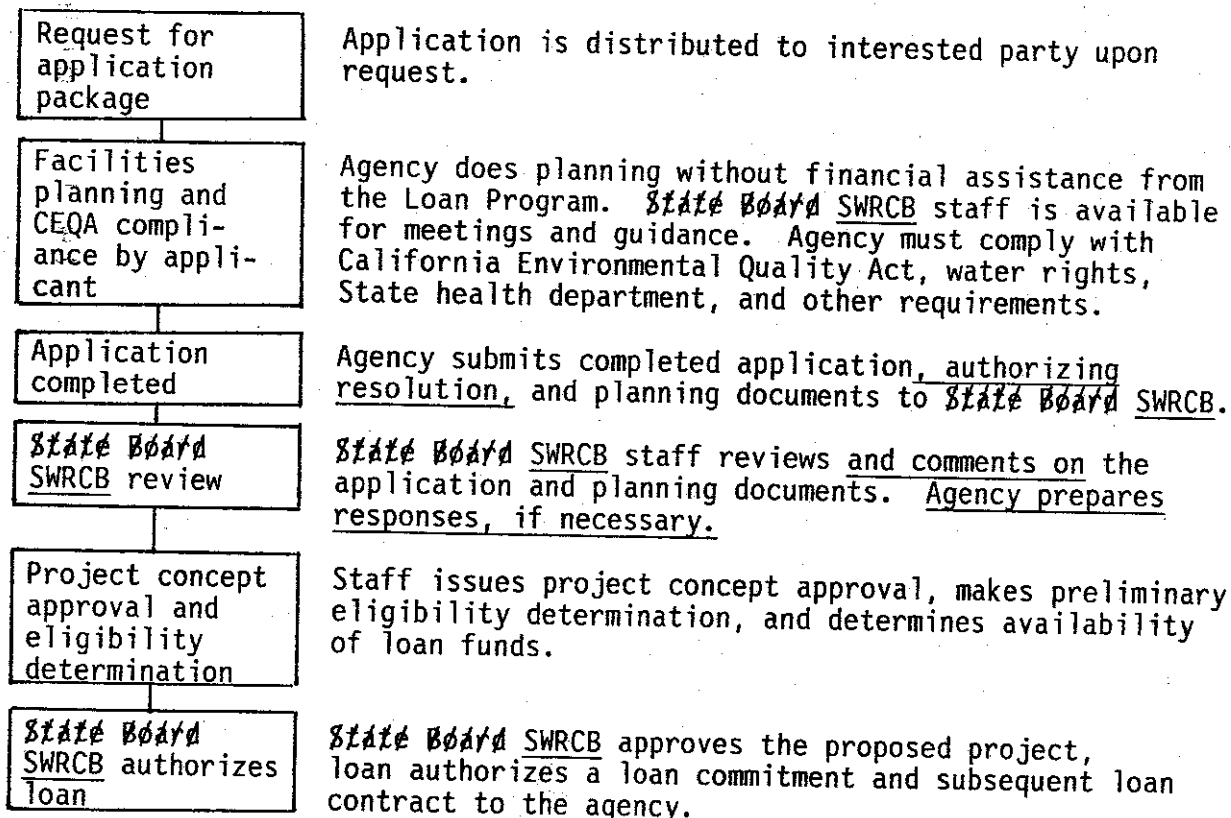
Water Reclamation

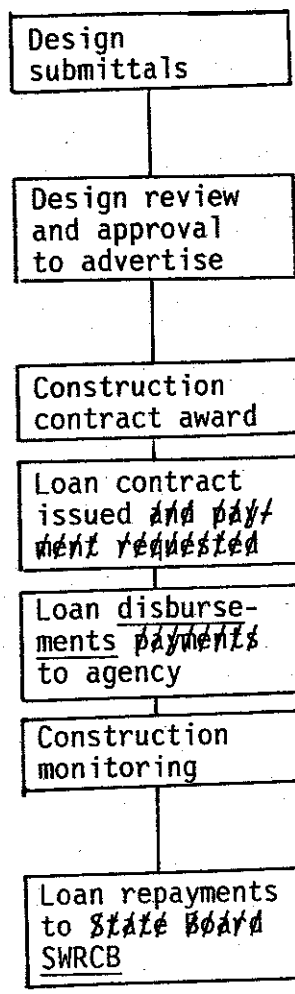
The process of treating wastewater to produce water for beneficial use, the storage and distribution of reclaimed water to the place of use, and the actual use of reclaimed water.

II. LOAN APPLICATION PROCESS

The reclamation loan application process begins with the State Board SWRCB distributing loan application packages to interested agencies upon request. The completed applications, including project planning documents, are submitted by the applicant for review. After the State Board SWRCB staff has determined that the loan application is complete, that is, that project planning is complete and all other application requirements have been met, that the project is ready to proceed, and that loan funds are available, staff will issue concept approval. The application will then be presented to the State Board SWRCB for approval of a loan commitment and subsequent loan contract. If loan funds are not currently available, consideration may be given to reserving future repayments returning to the Water Reclamation Account.

Once the project is designed, the State Board's SWRCB's Office of Water Recycling reviews and approves the plans and specifications, market assurances ~~use~~ contracts, construction financing plan, and revenue program. An approval to advertise is then issued to the applicant, and a loan contract is drafted. When the applicant has awarded the construction contract, the loan contract is executed and a loan disbursements payment may be commence. requested. Loan repayments from the applicant to the State Board SWRCB must begin within two years after award of construction contract. The entire application process is summarized below.





Agency submits 100% design submittal, including cost estimate, construction financing plan, revenue program, final market assurances user contracts, and plan for the use of remaining project capacity.

Staff reviews and comments on the design submittals. Agency prepares responses, if necessary. Staff makes final eligibility determinations, issues approval to advertise the construction contract, and drafts a loan contract.

Agency awards construction contract and submits related required information to State Board SWRCB.

State Board SWRCB and agency execute loan contract.

Agency requests loan payment disbursements. State Board SWRCB issues loan disbursements payments to agency.

Staff monitors status of construction and of users converting to reclaimed water use, reviews final revenue program. Agency submits financial report and final project summary after completion of construction.

Agency begins loan repayments within two years after award of construction contract, submits annual reports for five up to nine years of operation. the initial years of operation until the fifth year of operation or until seventh year following award of construction contract, whichever term extends longer!!

III. PLANNING REVIEW CRITERIA

In order for a project to be approved for a loan, a project must be cost-effective. A water reclamation project will be considered cost-effective when, compared with the development of (1) other new sources of water or (2) alternative new freshwater supplies (depending on which bond law is the source of funding), the proposed project will result in the minimum total resources costs over time to meet project objectives. Resources costs to be evaluated include monetary costs as well as nonmonetary factors, including social and environmental effects. An economic analysis, which considers all monetary costs associated with each alternative, is given primary consideration unless other factors are overriding. Other important factors include an assessment of the reclaimed water market, availability of reclaimed water, financial feasibility, energy consumption, and engineering.

IV. FACILITIES PLANNING

Loan applications cannot be processed unless accompanied by documentation of completed facilities planning. Loan funds are not available for facilities planning. Applicants are encouraged to notify the State Water Board before applying of its desire to apply. State Board staff can advise the applicant of the funding situation and work with the applicant during preparation of the application. The applicant will be advised what additional information is necessary in the case of an incomplete application.

Staff will not consider a loan application for funding until the facilities planning process has been completed. Agencies are encouraged to notify SWRCB staff of their interest in applying for a loan early in the planning process. SWRCB staff can then advise agencies about the availability of funding and assist agencies in developing facilities planning documents that comply with funding guidelines and preparing loan applications. While facilities planning is a necessary part of preparing a loan application, the Bond Laws do not provide for funding of expenditures for planning and loan application.

The planning process generally progresses through three levels of detail--conceptual, feasibility, and facilities. At the conceptual level, a potential project is sketched out, rough costs are estimated, and a potential reclaimed water market is identified. At this level little investigation has occurred and information is generally unreliable should not be relied upon.

At the feasibility level, a preliminary market assessment is performed, including with direct consultation with potential reclaimed water users. Alternative facilities are screened, considering economics, technical constraints, and other factors. The most feasible promising project is then investigated sufficiently to determine that whether it is appropriate to proceed to the facilities planning stage. Develop a firm plan and begin securing commitments from users and review by regulatory agencies.

At the facilities planning level represents the final stage of the planning process. Planning is essentially complete. Agencies are expected to complete this stage of the planning process before filing a loan application. At the facilities planning stage, a thorough cost-effectiveness analysis has been performed or is conducted for all potential alternatives, including economics, environmental and social factors, and technical feasibility. Environmental, technical, and institutional issues are identified and potential obstacles are resolved. All necessary facilities of the recommended project have been identified, and the project is described with sufficient detail to seek funding and approvals by regulatory agencies. The feasibility of a firm recommended project with specific facilities has been demonstrated and potential obstacles have been resolved. Potential reclaimed water users have been informed of the conditions for using reclaimed water, including probable price, and their interest has been documented through letters of intent or fully negotiated contracts. A detailed market assessment is performed, and a construction financing plan and revenue program have been developed. Agencies initiate formal discussions with suppliers, wholesalers, retailers, and users of the reclaimed water, and institutional arrangements are decided upon. Market assurances, such as mandatory use ordinances or letters of intent from users, are obtained. The recommended project has been described with sufficient detail to seek approvals by regulatory agencies and funding.

As part of the planning process the agency must conduct an environmental review in compliance with CEQA, as described in Section I. It will also be necessary to obtain clearance from the State Board's SWRCB's Division of Water Rights regarding compliance with Water Code Section 1211, if the proposed water reclamation project will modify a current wastewater discharge to a surface water course changing the point of discharge, place of use, or purpose of use of the treated wastewater. Because of the time involved in state water rights review, the Petition Unit of Division of Water Rights should be contacted early in the planning process. The SWRCB will not authorize a loan commitment until water reclamation requirements have been issued by the Regional Water Quality Control Board.

The completed facilities planning should be documented in a report, which is to be submitted with the loan application form. Additional information on facilities planning ~~and the market assessment~~ can be obtained from the State Board SWRCB (see Appendix B D). Monetary analyses, market assessment, and market assurances are described in the next following sections and Appendix A. If the loan application and supporting documents are incomplete, the applicant will be advised about what additional information is necessary.

V. MONETARY ANALYSES

An important factor in the cost-effectiveness analysis of water reclamation is an analysis of monetary costs and benefits. Monetary costs and benefits can be analyzed in different ways depending on the use of the results. In water resources planning two general categories of monetary analyses have been established: economic analysis and financial analysis. The purpose of the economic analysis is to determine whether a project alternative is justified by quantifying all monetary costs and benefits regardless of who pays the costs or receives the benefits. ~~with~~ The intent is to determine the alternative of least cost. The economic analysis does not have the viewpoint of any particular public agency or private entity. A financial analysis is intended to determine who pays the costs and receives the benefits and to determine financial feasibility. This analysis should indicate costs and benefits to the reclaimed water user, the taxpayer, and the water retailer or wholesaler, and the sources of funds to implement the project alternatives being evaluated. ~~measures.~~ A detailed discussion of monetary analyses can be found in Interim Guidelines for Economic and Financial Analyses of Water Reclamation Projects (see Appendix B D).

A. Economic Analysis

The first step in an economic analysis is to identify all items of increased or decreased cost as a result of each alternative under consideration, including continuing without a project. Costs experienced by entities other than the project sponsor must also be identified. For example, reclaimed water users may incur additional costs to convert to reclaimed water or may incur savings in fertilizer use because of nutrients in reclaimed water. All monetary values are expressed in current dollars, excluding inflation.

The basis of comparison for justifying a water reclamation project is a new freshwater supply that will be needed to serve the area of the reclaimed water project. The appropriate freshwater alternative for comparison is established in the facilities planning report in which the freshwater needs are projected and available facilities are discussed. The costs for use in the economic analysis of the new freshwater supply consist primarily of the capital and operation and maintenance costs of the new freshwater facilities and the variable costs of operating any existing water facilities that are needed in conjunction with the new facilities to deliver the new supply to the same market area as of the reclaimed water. Because the debt service or fixed operating costs of existing facilities would not be reduced by use of reclaimed water, these costs are not included in the economic analysis.

In an economic analysis, the present value of all immediate and future cost increases and decreases is calculated, including those experienced by other entities. The present values should be computed using a discount rate (a type of interest rate) specified by the State Water Resources Control Board SWRCB. To be able to compare the net cost of reclamation alternatives and proposed water supply developments on a common basis, dollars per acre-foot of water developed should be computed. A water reclamation alternative is considered economically justified if its net cost is less than the net future cost of a new freshwater supply serving the same area. supplying water from an existing system or new fresh water facilities. The net economic cost of supplying water from an existing system would not include its capital costs or fixed operational costs because they would not be reduced by use of reclaimed water and therefore are not relevant in an economic analysis.

B. Financial Analysis

The financial analysis actually consists of several analyses. An agency developing a water reclamation project must determine the costs and savings it will experience for each potential alternative to determine whether an alternative is financially feasible. It must identify sources of funds to finance proposed alternatives. The construction financing plan and revenue program demonstrate the basic financial feasibility from the perspective of the agency. These are described in Appendix A.

Important information for the reclaimed water users is the cost or savings they it will experience. Reclaimed water prices must be compared to the cost of fresh water that the users would otherwise use. The costs of on-site conversion to reclaimed water use must be estimated. Savings in fertilizer use should be considered.

In performing financial analyses, it is appropriate to use inflated dollars for future costs and to use an interest rate in present value analyses that is based on an agency's borrowing cost.

VI. RECLAIMED WATER MARKET ASSESSMENT

The completion of a detailed reclaimed water market assessment is a critical element of the facilities planning process and crucial to the success of any water reclamation project. A market assessment involves the identification of potential reclaimed water users, collection of information related to the users, and evaluation of the suitability of the reclaimed water to serve the potential market. Information is needed about and from the users to determine design criteria for a reclaimed water system, a reclaimed water pricing policy, financial feasibility, the amount and source of fresh water displaced, the institutional framework for the project, and the capability and willingness of users to take reclaimed water. The suitability of the reclaimed water is governed both by health and water pollution concerns and by the water quality needs of the users. Costs are a key element in bringing together reclaimed water and the potential water market. The general expectations of users is that the conditions of reclaimed water service will be comparable to alternative fresh water supplies, particularly for users already accustomed to taking potable water.

The reclaimed water market assessment process generally includes two levels of detail -- preliminary and detailed. Agencies typically perform a preliminary market assessment during the feasibility planning stage. The preliminary market assessment is developed through consultation with users and provides general data, such as the number of potential users, and the amount and type of potential reclaimed water use. While this information is adequate to allow an agency to determine whether a project warrants further consideration, additional information is necessary to determine the economic and financial feasibility of the project.

Agencies are required to conduct a detailed market assessment as part of the facilities planning process. The market assessment shall include as a minimum all of the users or service area of the facilities the capacity for which loan funding is requested. Like the preliminary market assessment, the detailed market assessment must be developed through direct consultation with potential users. The following information should be included in the detailed market assessment:

A. General Information

1. List and map of potential users in the study area and types of uses.
2. State and local health department reclaimed water quality requirements and delivery requirements (backflow prevention, irrigation methods, levels of treatment, etc.) for each type of use.
3. Regional Water Quality Control Board (Regional Water Board) reclaimed water quality and delivery requirements for each type of use and any restrictions in certain geographical areas for protection of ground water or surface water.
4. An estimate of the probable water quality of secondary and tertiary effluents that could be made available in the future and a comparison of them to the health and water quality requirements of potential users.
5. An estimate of future fresh water supply costs to users.

6. An estimate of costs for facilities or modifications needed on user sites to accept reclaimed water for each type of user site.

B. Individual User Information

1. Specific potential uses of reclaimed water.
2. Location of user.
3. Present and future quantity needs. (For existing water users, present water use should be documented with three previous years of water usage.)
4. Timing of needs.
5. Quality needs.
6. Reliability needs regarding availability and quality of reclaimed water.
7. Needs regarding disposal of used reclaimed water.
8. Present source of water, present water retailer, cost of present source of water.
9. When user would be capable of using reclaimed water.
10. For undeveloped future potential sites, the year in which water demand is expected to begin, current status and schedule of development (with supporting evidence, such as subdivision maps, land use permits, general plan land use designations, irrigated acreages, etc.).

Determination of the market for reclaimed water in future development depends upon various sources of information of varying reliability. For near-term development that is proposed for inclusion in the ninth-year eligible capacity, information will generally be expected directly from land developers of their intentions, following the model format available from the Office of Water Recycling. This information shall be submitted for review before concept approval is issued. Undeveloped sites may be included as part of the first year delivery commitment if the development has proceeded sufficiently through design and received sufficient approvals and permits that the SWRCB can safely assume that the user will be ready to accept reclaimed water upon completion of construction of the reclamation project.

The preparation of the market assessment should be viewed not only as a data collection exercise, but as an integral step in the reclaimed water marketing process. Potential customers should be familiarized with details of the proposed project, including the proposed project schedule, the projected water quality and reliability, and the projected price of reclaimed water in comparison with alternative water supplies (if such water supplies would be available to the customer). An agency that has adopted a mandatory use ordinance should also provide information about the ordinance and the customer's responsibility under the ordinance. Evidence of this public education effort (e.g., a copy of the

information package provided to potential users) should be included in the detailed market assessment. A copy of the detailed market assessment must be submitted with the loan application.

VII. RECLAIMED WATER MARKET ASSURANCES

Reclaimed water market assurances serve to ensure that the water produced by a project will be utilized within the time frame envisioned in the facilities planning documents. The market assurances involve a means of securing the initial reclaimed water users as well as the agency's plans for connecting users for the entire loan-eligible capacity of the project. The means for securing the initial reclaimed water users generally take two forms: 1) mandatory use ordinances in which potential users are mandated to participate in the project or 2) user contracts in which potential users voluntarily commit themselves to participate in the project. The two forms of assurances are described below.

The agency will be required in the initial year following completion of construction to use at least 25 percent of the ninth-year eligible project capacity. The agency will be required during the ninth year following completion of construction to use the total ninth-year eligible project capacity. If reclaimed water user connections are proposed to be phased, at least 50 percent of the ninth-year eligible project capacity must serve users that will exist by the time of completion of construction. Existing users must be covered by the mandatory use ordinance or user contract provisions below.

If the ninth-year project reclaimed water deliveries or the 20th-year pipeline deliveries are proposed to include additional user connections after the first year of operation, the market assurances will include a description of the future phases of expansion by the agency and their schedule. Existing water users proposed to be included in eligible project capacity will be expected to be connected to the system upon the initial project operation. Anticipated connection of existing water users at a later time will be supported by adequate reasons for the delay in connection and a firm schedule for the construction of facilities to make the connections. The plan for use of the full eligible capacities of facilities shall be submitted with the loan application and updated, if necessary, with the submittal of final plans and specifications.

A. Mandatory Use Ordinances

A mandatory use ordinance is a law adopted by a retail water purveyor requiring the use of reclaimed water in place of another source of water. For the ordinance to be an acceptable form of market assurance, it shall contain certain provisions:

1. Specification of the types of use of water for which reclaimed water must be used.
2. Specification of the conditions under which reclaimed water must be used or new development must be plumbed for future reclaimed water use.
3. Procedure for determining which water users are required to either convert to reclaimed water service or be plumbed to accept reclaimed water upon new water service.

4. Procedure to provide notice to potential users that they are subject to the ordinance and specification that the notice include information about the project, the responsibilities of the users under the ordinance, the price of the reclaimed water, and description of the on-site retrofit facilities requirements.
5. Procedure for request by the users for a waiver.
6. A penalty for noncompliance with the ordinance. Minimum acceptable penalties are discontinuance of freshwater service, a freshwater rate surcharge of at least 50 percent of the freshwater rate, or an equally effective penalty.

If the agency implementing the reclaimed water project does not have the legal authority to enforce a mandatory use ordinance (for example, a sewerage agency), the mandatory use ordinance may be implemented by the retail water purveyor.

The SWRCB staff will review a copy of the adopted ordinance along with the loan application. Concept approval of the project will establish the eligible capacity of the project based on the market assessment. The SWRCB's resolution approving a loan commitment will include a requirement that the local public agency submit either 1) copies of letters of intent to participate in the project or 2) copies of the notifications to the users subject to the ordinance, a statement of whether any notified users appealed the conditions of reclaimed water use, and documentation showing the disposition of any appeals. The resolution will require that these items be submitted to the SWRCB staff before approval to advertise for construction, but in no case later than six months from the date of the resolution. The SWRCB staff will have 60 days from the date of receipt of submittals to approve or reject them, otherwise the submittals will be considered adequate. The SWRCB's resolution will include a provision that if the agency does not submit these items within six months or if the submittal is considered inadequate by the SWRCB staff, the resolution is null and void, and the project will need to be resubmitted for approval. Depending on the documentation eventually submitted, the concept approval may be revised before request for reapproval by the SWRCB.

There may be limitations on the application of mandatory use ordinances. Certain potential users may not be subject to the ordinance for various reasons, for example, a user may not be obtaining water service from the agency with the ordinance or the user may be outside of the service area of the agency. In such situations, user contracts may be expected to cover users intending to take reclaimed water during the first year of operation. The ordinance shall apply to sufficient users that in aggregate represent most of the reclaimed water deliveries for water users that will exist by the time of completion of construction.

B. User Contracts

A user contract is a binding agreement between reclaimed water purveyors and users, signed by both parties. For the SWRCB staff to accept a user contract as an acceptable form of market assurance the contract must contain certain provisions:

1. A commitment to use the reclaimed water for a minimum period of 10 years.
2. The amount of reclaimed water the user intends to take annually.
3. The sites and the types of use of the reclaimed water.
4. Specification of the conditions of reclaimed water use, including the water quality.
5. The price of the reclaimed water.
6. Description of the regulatory and water purveyor requirements for on-site retrofit facilities needed to convert from freshwater to reclaimed water.
7. Date when reclaimed water use will commence.

User contracts are required from sufficient users that in aggregate represent most of the reclaimed water deliveries for water users that will exist by the time of completion of construction. The agency must submit with the loan application letters of intent from the proposed reclaimed water users intended to execute user contracts. The content of the letters should follow the model format provided by the Office of Water Recycling. The user contracts shall be submitted before SWRCB approval to advertise for construction.

VIII. ELIGIBILITY CRITERIA

The following eligibility policies have been established by the ~~State Board~~ SWRCB regarding costs and types of projects eligible and ineligible for loans.

A. Eligible Costs

1. Costs of construction and of land or right-of-way purchase for water reclamation treatment, storage, and distribution systems shall be eligible for loans.
2. The eligible cost may include an allowance, if requested by the loan recipient, to cover design and engineering, legal and administrative services associated with the design and construction of the eligible reclamation project. The amount of such allowance shall be up to 15 percent of the eligible cost of construction and land or right-of-way purchase.

In addition, the eligible cost may include an allowance, if requested by the loan recipient, to cover design services only for design costs of future phased expansions of facilities on the same site as facilities to be constructed as part of the loan. The phased expansions may include a capacity for up to 20 years after completion of construction. The amount of the allowance shall be up to 10 percent of the engineer's estimate of the construction cost of expansions based on 100 percent design.

3. Project facilities which are eligible must remain in public ownership and have provision for adequate operation and maintenance and adequate right-of-way.

4. Reclaimed water distribution systems from the source of supply to the property line of the reuse sites shall be eligible for a loan. Eligibility of a system on the property of the user should be limited to:
- o Reclaimed water service line up to and including the water meter if the meter is located in the proximity of the property line.
 - o Reclaimed water service line up to a main storage facility serving the user on the reuse site or, if there are more than one use areas that are widely separated on the property, up to the point of initially dividing the water flow.
5. A reclaimed water distribution pipeline shall be eligible if the terminal point serves a user that is committed by mandatory use ordinance or by user contract under contract or similar firm commitment to take reclaimed water during the initial operation of the project. If only a portion of a pipeline serves users secured by a firm commitment, then eligibility shall extend to the most downstream user secured by a firm commitment.
6. The capacity of a project eligible for a loan shall be that capacity which can be used within five ~~nine~~ years of completion of construction. However, pump station wet wells and buried pipelines at the treatment facility or in the distribution system shall have an eligible capacity of up to twenty years when documented by a market assessment showing the twenty year service area and identifying and analytically projecting all existing and future uses to be served by the reclaimed water pipeline proposed for loan funding. ~~For purposes of this section completion of construction is defined as two years after award of the construction contract.~~ These eligible capacities are measured in terms of annual reclaimed water deliveries. Eligible sizes of facilities components are based on reasonable design criteria, including peaking factors, to serve these annual deliveries. There shall not be any restriction on the capacity of a project. Capacity in excess of the eligible project shall be funded with funds other than the State Board SWRCB loan.
7. Agencies constructing pipelines or treatment facility capacity in excess of that which can be utilized within five years of completion of construction must demonstrate that adequate reclaimable water supplies will be available to support that future capacity. This documentation may take the form of: 1) an urban water management plan or equivalent water supply planning document which specifically identifies measures intended to assure that, in a year of normal supply and demand, an adequate supply of water will be available to support the projected growth in wastewater flows or, 2) certification by the agency that existing tributary wastewater flows will meet or exceed the capacity of the proposed reclamation project at the time of the completion of the project.
- 7/ ~~The applicant will be required in the initial year following completion of construction to use at least 30 percent of the total project capacity multiplied by the ratio of State Board funding to total project costs. The State Water Board will conduct an initial review of the applicant's assurances for reclaimed water use at the time of loan application. Before approval to advertise, user contracts shall be provided as evidence of probable compliance with this initial year use requirement. At that time the State Board will~~

review the adequacy of these user contracts and the applicant's proposals for use of the remaining capacity. The requirement for a user contract may be waived if a reclaimed water user is subject to a mandatory reclaimed water use ordinance or policy and such user will be capable of using reclaimed water in the initial year of project operation.

The applicant will be required during the fifth year following completion of construction to use the total project capacity multiplied by the ratio of State Board funding to total project cost. For purposes of this section, completion of construction is defined as two years after award of the construction contract.

B. Ineligible Costs

1. The following costs shall not be eligible for loan funds:
 - o costs of planning for a project
 - o costs of applying for a loan
 - o cost of land for the purpose of application of reclaimed water
 - o costs for operation and maintenance of project facilities/
 - o legal and court costs resulting from violation of state and federal laws, excluding the cost of capital facilities required to be built as a condition or result of a legal or court settlement.
2. Eligible costs of construction performed by the loan recipient's work force shall not include indirect costs, of that is, expenses not readily identifiable with the eligible reclamation project, such as ordinary operating expenses of the loan recipient. A more detailed discussion may be found in "Water Reclamation Loan Program Guidelines on Force Account Eligible Costs."

C. Miscellaneous

1. Multiple-purpose projects shall be eligible in proportion to the costs allocated to water reclamation. and reuse. An example of a multiple-purpose project would be a ground water recharge project that percolates both storm water runoff and treated wastewater.
2. Projects for reclaiming ground water, including desalting and nitrate removal projects, shall be eligible if the water to be treated has become unusable primarily because of human activities. This includes municipal, industrial, or agricultural activities. The degraded source water may be provided to the project directly, such as from a wastewater treatment plant, or indirectly, such as pumping from a brackish or polluted ground water basin. Projects for desalting naturally occurring saline or brackish waters shall not be eligible for a loan.
3. Reclamation of industrial wastewater shall be eligible for a loan provided the loan applicant is a municipality or a local public agency, as defined in Section I. In-plant recycling projects are not eligible for a loan.
4. Project changes are permitted after approval of the project by the SWRCB; provided that there is no change in the scope of the project. If there is a change in scope of a project, the SWRCB staff shall bring the project to the SWRCB for reapproval. The scope of a project is considered to have changed if there is any of the following:

- a. A decrease in the reclaimed water deliveries projected for the ninth year following completion of construction by more than 15 percent.
- b. A change required in the environmental documents prepared under the California Environmental Quality Act such that the State Water Board is required to reconsider the environmental documents.
- c. An increase in the total economic cost of the project such that the cost exceeds the alternative freshwater cost by more than 15 percent.
- d. An increase in the total eligible project cost such that it exceeds the preliminary loan commitment amount by more than 50 percent.
- e. An adverse effect on the engineering or financial feasibility of the project.

The SWRCB Project Manager shall be promptly informed of project changes during construction. Because changes may affect project eligibility or require reapproval by the SWRCB, substantial changes during construction should be approved before initiating the change.

The maximum loan amount will be based on bid amount at the time of award of the construction contract, as described in Section IX. All project changes during construction that result in cost increases above the maximum loan amount shall be the responsibility of the loan recipient. Changes during construction may result in decreases in eligible costs. Such decreases may offset cost increases for eligible project costs. Eligible cost increases may result from 1) overruns in quantities beyond estimates in original bids for eligible work specified at the time of bid or 2) change orders for changed work which has been approved for eligibility. The final loan amount will be adjusted downward for any decreases in eligible cost items less any eligible offsetting cost increases, up to the maximum loan amount. Change orders will be reviewed for eligibility only if there is a request from the loan recipient and there is an offsetting cost decrease.

5. Retroactive funding of construction is not eligible for loan funds, with the exception that eligibility may be reserved for advance construction of minor portions of a proposed project with prior approval by SWRCB staff. Advance construction is not eligible for any facilities commencing construction before submittal of the loan application. Advance construction shall be justified based on the cost savings or time coordination with the main portion of the project. Prior approval does not constitute an assurance of final eligibility. Such eligibility is determined at the time of plans and specifications approval of the main project.

IX. VII/ LOAN FINANCIAL PROVISIONS

Successful loan applicants will receive loan funds during project construction based on evidence of satisfactory construction progress. No loan funds will be advanced during design. Interest charges on loan funds begin to accrue as soon as loan funds are disbursed. The maximum loan amount will be based on bid amount at the time of award of the construction contract. An allowance for design costs and engineering, legal, and administrative costs may be included. Increases in the

loan amount will not be permitted due to changes in cost during construction. The standard loan provisions will provide for equal ~~payments~~ annual repayments up to for a 20-year term following the date of the loan contract. However, shorter repayment periods are encouraged and may be imposed. ~~to be considered.~~ Repayments will consist of annual payments for the term specified in the loan contract. The repayment will consist of principal and interest. The initial repayment shall be made not later than two years after award of the construction contract. Additional details regarding the financial aspects, as well as general contractual requirements, can be found in Appendix A and in the model loan contract, which can be obtained upon request (refer to Appendix B ~~D~~).

X. VIII/ DESIGN, CONSTRUCTION, AND OPERATION

Before a project can receive approval to advertise the construction contract, staff must ensure that:

1. The design is consistent with the project described in the concept approval;
2. The construction contract documents comply with all state administrative requirements and contain provisions specified in the loan contract;
3. Agency has the required market assurances; and ~~executed user contracts in accordance with State Board policy (stated above) and has a plan for use of the remaining capacity within seven years following award of the construction contract; and~~
4. All other state and concept approval conditions have been met.

A ~~submittal of the~~ Staff must review final plans and specifications and other documents ~~is required before issuing approval to advertise is issued.~~ The final design submittal consists of the following: 1) complete, biddable, and signed plans and specifications; 2) a detailed, itemized engineer's cost estimate; 3) updated revenue program; 4) updated construction financing plan and; 5) reclaimed water market assurances, user contracts and B) a plan or program indicating probable use of the remaining project capacity.

Promptly upon award of the construction contract or contracts, the Agency shall notify the SWRCB Project Manager of the award. The notice shall be accompanied by a tabulation of bids received, the most recent engineer's estimate of project cost ~~available~~, a copy of the lowest acceptable bid proposal, a description of any bid protest received together with a description of how the protest was resolved, a copy of any project changes or addenda issued since approval to advertise was given, and a copy of the signed construction subcontract. If the Agency awarded to anyone other than the apparent low bidder, the reasons for not awarding to the apparent low bidder & full explanation shall be provided.

Agencies are encouraged to adopt a reclaimed water ordinance or regulation to ensure the long term successful operation of a reclamation project in compliance with health, safety, and water quality requirements. A reclaimed water ordinance can include conditions under which users accept reclaimed water and define the requirements for on-site facilities design, construction, operation, monitoring and inspection, connection fees and service charges, enforcement, and penalties. An ordinance can ensure that certain design criteria and standards incorporated into the original project can be carried on in project expansion as new users are added.

Agencies are also encouraged to prepare a reclaimed water user manual. The manual is used by personnel employed by users of reclaimed water who handle reclaimed water on a daily basis, such as park maintenance staff. The manual, usually a two to ten page guide, would cover in simplified language such topics as irrigation scheduling, precautionary measures, emergency procedures, control of runoff, and routine maintenance. It can also include a simplified description of the treatment that reclaimed water receives before reuse and the overall reclaimed water system.

Once the project begins operation, the project will be monitored for progress in connecting reclaimed water users and delivering reclaimed water. Annual reports must be submitted by the loan recipient for a minimum period of five years. The reporting period will be extended to up to nine years depending on the number of years of eligible capacity funded by the loan.

XI. IX/ FURTHER INFORMATION AND ASSISTANCE

For those local agencies interested in applying for a reclamation loan, please complete an application form. Submit the application form and all project planning documents to the State Board SWRCB.

Additional information can be secured by use of the order form in Appendix B D. The Office of Water Recycling is available to answer questions and advise the applicant during the planning process. The Office of Water Recycling can be contacted by writing to Office of Water Recycling, Division of Loans and Grants/ Clean Water Programs, State Water Resources Control Board, P. O. Box 944212, Sacramento, California 94244-2120 or calling (916) ~~739-4268~~ or ~~739-4400~~ 227-4580 or 227-4400.

APPENDICES

- A. LOAN REPAYMENT AND FINANCIAL ANALYSES
- B/ MODEL RESOLUTION AUTHORIZING APPLICATION FOR WATER RECLAMATION LOAN FUNDS
- C/ MANDATORY RECLAIMED WATER USE ORDINANCES
- B. D. ORDER FORM FOR ADDITIONAL INFORMATION

APPENDIX A

LOAN REPAYMENT AND FINANCIAL ANALYSES

I. Introduction

Not an Typically, money is an essential ingredient for a feasible water reclamation project. It must be raised to finance design and construction, to provide positive cash flow during construction, and, once operation has commenced, to repay debts and pay for operation and maintenance. These guidelines contain the repayment provisions for loans from the Water Reclamation Loan Program and the desired documentation to demonstrate financial feasibility. More detailed information on financial analyses can be found in the State Water Resources Control Board's SWRCB's Interim Guidelines for Economic and Financial Analyses of Water Reclamation Projects.

Two financial reports are required: a construction financing plan and a revenue program, which covers the period commencing with initial facilities operation. These two reports documents must be submitted with the loan application (as part of the facilities plan) and updated and submitted with the 100 percent design submittal. A final revenue program must be submitted at completion of construction.

II. Loan Repayment Provisions

Loans from the Water Reclamation Loan Program will have an interest rate set at 50 percent of the average interest rate paid by the State on the most recent sale of general obligation bonds. The term of the loans may be for a period of up to 20 years. The loan term begins from the loan contract date. Repayments will begin on the last day of the month following two years after award of the prime construction contract.

III. Construction Financing Plan

It must be demonstrated that there are sufficient financial resources to finance the design and construction of the project. The construction financing plan generally consists of at least the following items:

1. An up-to-date capital cost estimate, including construction, engineering, legal, and administrative costs with a reasonable allowance for contingencies.
2. A cash flow analysis consisting of a monthly forecast of expenses during design and construction and sources of funds to meet those expenses.
3. The sources and amounts of funds for capital costs, including the status and timing in securing those funds.

There will be no disbursements of loan funds from the Water Reclamation Loan Program until the award of construction contracts. Thus, the loan recipient must carry design costs until the initiation of construction. Loan disbursements will be made during construction. If there are multiple construction contracts, the loan disbursements will be proportioned amongst each construction contract.

The cash flow analyses should be based on the above procedures for loan disbursements schedule and the assumption that receipt of loan funds will take 60 days from date of request.

IV. Pricing Policy

There are a variety of potential methods for determining the price customers will pay for reclaimed water. The most typical include:

1. The reclaimed water price is set to match exactly production costs.
2. The reclaimed water price is set at a given percentage discount from whatever potable water prices are.
3. The reclaimed water price is set at a given dollar discount from whatever potable prices are.

Some agencies charge a meter charge or have multiple rates if they have both wholesale and retail sales.

Some of the considerations involved in establishing reclaimed water rates are:

1. The costs that are expected to be recovered by reclaimed water revenue.
2. The costs and inconvenience to reclaimed water customers resulting from switching part of their water use to reclaimed water.
3. Whether the water agency will pay for on-site conversion costs of reclaimed water customers.
4. The degree of integration of the reclaimed water supply into the water agency's overall sources of supply, and thus the integration of costs and revenue from the various sources of supply.

Within the limits of financial feasibility, it is the recommendation of the Office of Water Recycling that the price of reclaimed water be as high as reasonable, taking into consideration the value of reclaimed water as compared to the price of fresh water. A reasonable discount from fresh water prices is often the most equitable.

V. Revenue Program

The financial feasibility of a project once it has started operation is shown in a revenue program. In general, a period of 10 years should be forecast. The following items should generally be included for each year:

1. reclaimed water demand by each user
2. fresh water prices applicable to the reclaimed water users
3. reclaimed water prices
4. total reclaimed water revenue
5. debt repayment

6. operation and maintenance costs, broken down by category with fixed and variable costs separated
7. supplementary funds provided to accommodate any revenue deficiency
8. sensitivity analysis assuming portion of potential users fail to use reclaimed water.

The assumptions and bases for all numbers should be fully stated and referenced. The pricing policy for the reclaimed water should be explained. It may be necessary to allocate project costs between pollution control and water supply or between categories of users.

Water supply agencies frequently have more than one source of water. The finances for these various sources are usually integrated, and customers are charged a common melded price, even if they receive water from only one of the sources. Likewise, reclaimed water should not be viewed as an alien source of water, but rather as simply an added supply to meet the overall water demands of a water supply agency. Its only distinction is that its quality restricts its uses. As such, it is desirable that the finances for a reclaimed water system be integrated with those for the fresh water sources of supply. Once it has been determined that reclaimed water costs are justifiable compared to other sources of supply, the reclaimed water supply should not be treated as an independent system financially.

With reclaimed water viewed as a complement to a water system, reclaimed water prices should be established using the same standards as fresh water, taking into consideration some of the peculiarities mentioned in the previous section. If revenues from reclaimed water are insufficient to cover all expenses from the reclaimed water system, as is common in the initial years of operation, the shortfall can be made up with revenue from the fresh water system. Likewise, excess reclaimed water revenues can be used to cover other agency expenses, allowing all customers to benefit.

Because reclaimed water is serving as a replacement for fresh water, there inevitably is an effect on fresh water costs and revenue. It is desirable to quantify these effects and include them in the revenue program to describe fully the costs and benefits derived from the reclaimed water. This is often useful to provide justification for using fresh water revenue to help pay for a reclaimed water system.

APPENDIX B

MODEL RESOLUTION AUTHORIZING APPLICATION FOR WATER RECLAMATION LOAN FUNDS

BE IT RESOLVED that the ////////////////////////////////////

(Governing Board of Applicant)

hereby authorizes application for a loan from the Water Reclamation Loan Program of the California State Water Resources Control Board in the amount of \$//////////////////////////////////// for the design and construction of ////////////////////////////////////

//////////////////////////////////// and

(Project title or description)

authorizes execution of a loan contract if a loan for this project is offered.

BE IT RESOLVED that the ////////////////////////////////////

(Name or title of representative)

is hereby authorized for and on behalf of the ////////////////////////////////////

(Applicant)

to submit a loan application and negotiate and execute a loan contract for this project.

APPENDIX C

MANDATORY RECLAIMED WATER USE ORDINANCES

State/Water Board policy is that at the time of State approval for agencies to advertise construction contracts, the State Water Board will review user contracts for assurances that there are contractual obligations to accept deliveries of reclaimed water in the third year following award of the construction contract in the amount of 50 percent of the total project capacity multiplied by the ratio of State/Water Board funding to total project costs.

Some agencies have ordinances, regulations or enforceable policies that require the use of reclaimed water in place of fresh water if reclaimed water is made available. Such ordinances or policies are considered acceptable equivalents of contractual obligations and, therefore, user contracts may not be required under certain conditions. A mandatory use ordinance or policy has effect only if a potential user is capable and ready to accept reclaimed water by the third year following award of the construction contract for the loan-funded project. A special condition has been drafted for inclusion in the loan contracts that have a mandatory use ordinance or policy:

No user contract will be required for any user subject to an ordinance or enforceable policy of the Agency which requires that user to accept reclaimed water in lieu of fresh water and where that user is either presently using fresh water or is constructing a facility which will be ready to receive reclaimed water two years following award of the prime construction subcontract.

There are situations where a future user is not currently constructing facilities to use reclaimed water but has proceeded sufficiently through design and received sufficient approvals and permits that the State/Water Board can safely assume that such user will be ready to accept reclaimed water two years following award of construction of the loan-funded project. It is intended to maintain some flexibility in the loan program as long as the State/Water Board can be assured that the intent of our policy will be met. However, individual situations must be critically evaluated. Thus, it is intended that the State Water Board may on a case-by-case basis waive the requirement for a user contract where a potential user is covered by an ordinance or enforceable policy as described in the contract special condition above and where that user has completed preliminary design, approved by the appropriate regulatory agencies, for an on-site facility which will use reclaimed water and there is assurance that the on-site facility will be constructed upon completion of construction of the water reclamation project.

JUN 7 1994

APPENDIX B D

ORDER FORM FOR ADDITIONAL INFORMATION

Please review the below list of additional documents relating to the Water Reclamation Loan Program. If you wish to obtain any of the documents, please provide the requested information.

A. Check the items desired:

- 1. Clean Water Bond Law of 1984
- 2. Clean Water and Water Reclamation Bond Law of 1988
- 3. Water Reclamation Loan Program Policy and Procedures
- 4. Sample Letter of Intent for Use of Reclaimed Water
- 5. Desirable Provisions of Reclaimed Water User Contracts
- 6. Model Reclamation Loan Contract
- 7. Interim Guidelines for Economic and Financial Analyses of Water Reclamation Projects
- 7. Background Information on Economic Analyses of Reclamation Projects
- 8. Loan Application Package (Application Form, Water Reclamation Loan Program Guidelines, and Guidelines for State Loan Program Applicants: Compliance with the California Environmental Quality Act (CEQA))
- 9. (a) Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities and (b) State Revolving Fund Loan Program Funding for Water Reclamation Projects
- 10. Facilities Planning Information

B. Provide the mailing address:

NAME: _____

TITLE: _____

AGENCY: _____

MAILING ADDRESS: _____

CITY, STATE, ZIP CODE: _____

C. Fold this order form in half, affix postage, and mail to pre-printed address on reverse side.