

- **Board of Directors**
Water Planning and Stewardship Committee

March 13, 2007 Board Meeting

9-2

Subject

Review of existing locally developed resources and interruptible supply programs

Description

Introduction

Metropolitan has a rich history of working with its member agencies to strengthen local water resource development in synchronization with imported water supply strategies to improve overall regional supply reliability. Locally developed resource categories include water recycling, groundwater recovery, conjunctive use, seawater desalination and conservation. Local resources are basic elements of Southern California's diverse portfolio of resource options. Highly regulated recycled water supports groundwater recharge, landscape and agricultural irrigation and progressive commercial and industrial applications (e.g., cooling towers, carpet dying, and process water use). Recovery of degraded groundwater resources through desalination and other treatment processes expands the use of the region's groundwater storage assets and helps prevent the spread of degradation plumes. Metropolitan also works closely with groundwater managers to develop fill and withdrawal programs that use imported supplies in conjunction with groundwater storage resources. One recent local resource opportunity is planning desalination of seawater to increase potable supplies. Implementing progressive conservation measures is an anchor program for the region that ensures prudent stewardship of limited resources.¹

Interruptible supply programs provide operational flexibility and increased reliability by encouraging member agencies to store water during times of surplus, and by providing Metropolitan with the option of shedding water demand during times of constrained supply and potential shortage. Metropolitan's two interruptible supply programs - Replenishment Service and the Interim Agricultural Water Program - are intended to help meet this need. These programs are described in a later section.

Locally Developed Resources

Water Recycling and Groundwater Recovery – Recycled water and groundwater recovery projects in Southern California are developed by local water agencies. Many recent projects have been developed with financial incentives provided by Metropolitan's Local Resources Program (LRP). Since 1981, the LRP has evolved with both program administrative and name changes to its current form (**Attachment 1**). Metropolitan and the member agencies are currently reviewing the program and formulating the next set of administrative improvements. In 1998, LRP was created by combining elements of the then existing Local Projects Program and the Groundwater Recovery Program. The LRP provides pay-for-performance financial assistance of up to \$250 per acre-foot for development of new recycled water and recovered groundwater supplies for the region. **Attachment 2** summarizes LRP activity and costs through fiscal year 2005/2006.

The Local Projects Program, initiated in 1981, was designed to facilitate the development of local water recycling projects by providing financial assistance. The Groundwater Recovery Project (GRP) was established in 1991 with the objective of increasing regional groundwater production by recovering otherwise unusable groundwater that had been degraded by minerals and other contaminants. Both programs went through changes until being replaced by the LRP in 1998.

Seawater Desalination – The 2004 IRP Update provides for up to 150,000 acre-feet of seawater desalination from within a target of 750,000 acre-feet (with a buffer supply) of local water to be produced in 2025.

¹ Conservation will be discussed separately in an April 2007 board letter.

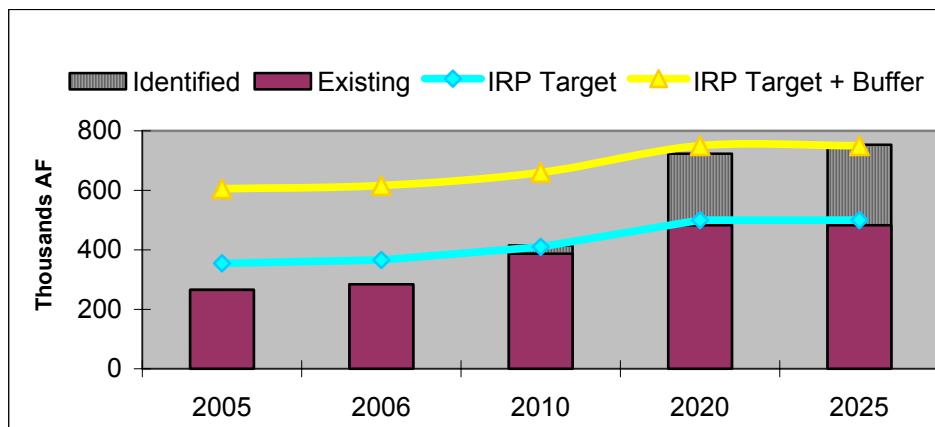
Working with the member agencies, Metropolitan’s Board approved providing financial support for five proposed seawater desalination projects in its service area ([Attachment 3](#)). Financial incentives would be up to \$250 per acre-foot of desalinated seawater used to increase potable supplies. These projects are expected to come in the 2010 to 2015 time range and are currently in the planning, piloting and permitting stages.

Despite declining costs, implementation of large-scale seawater desalination plants continues to face formidable challenges including high power costs, the cost of membrane replacement, and permitting issues. To address project issues requiring additional research and investigation, Metropolitan provided \$50,000 to each of the five member agencies submitting proposals to research various aspects of seawater desalination. Finally, Metropolitan is also assisting its member agencies in developing legislative strategies, seeking grants and loans, and informing decision-makers about the role of seawater desalination in the region’s water resource portfolio.

IRP Targets – In approving the IRP Update, Metropolitan’s Board directed that a planning buffer supply be established to hedge against potential resource implementation risks and supply/demand uncertainty.² Accordingly, the IRP Update called for identification and implementation of a 500,000 acre-foot supply buffer over and above the established IRP targets. Half of this increase will be drawn from increased Central Valley transfer targets; the other 250,000 acre-feet per year will result from increases in the targets for water recycling, groundwater recovery and seawater desalination.

Figure 1 shows the new IRP targets with and without the supply buffer. These targets apply to the combination of programs funded entirely by local agencies plus those developed with Metropolitan’s funding assistance.

Figure 1: Local Resources Program IRP Targets



Interruptible Supplies

Metropolitan’s Interim Agricultural Water Program ([Attachment 4](#)) and the Replenishment Service Program ([Attachment 5](#)) are both intended to help reduce demands on Metropolitan during times of shortage. The effect is to increase the reliability of supplies available for other uses.

Interim Agricultural Water Program – The Interim Agricultural Water Program provides water service for agricultural use. Currently, the program allocates a maximum of 155,190 acre-feet for purchase at a discounted rate to 12 eligible agencies. As a condition of program participation, member agencies provide a written plan to Metropolitan showing how it will meet mandatory cuts to its Interim Agricultural Water Program deliveries during a shortage. Should a supply shortage occur, the General Manager might exercise discretion to reduce program deliveries by up to 30 percent prior to imposing any mandatory reductions as set forth in Metropolitan’s *Water Surplus and Drought Management Plan*. Assuming participating agencies were drawing their allowable

² The planning buffer calls for Metropolitan to develop 500,000 acre-feet of supplies in addition to the 2025 IRP resource targets. Development of the buffer will be equally split between local and imported sources. The supply buffer is consistent with Metropolitan’s practice of developing supplies that are available at least 10 years in advance of need. Partial or full implementation of the supply buffer is dependent on the progress in developing planned projects and ongoing decisions by the Board of Directors.

maximum amount when the General Manager called for 30 percent reductions, 46,557 acre-feet would become available to meet other Metropolitan service area needs.

Replenishment Service Program – The goals of the Replenishment Service Program are to: (1) achieve greater conjunctive use of imported and local supplies; (2) encourage construction of additional local production facilities; and (3) reduce member agencies' dependence on deliveries from Metropolitan during periods of shortage. Replenishment Service water is available whenever the General Manager determines that water and system capacity are available.

Member agencies are encouraged to take replenishment water through a discounted rate offered by Metropolitan. To receive the lower rate, agencies must certify to Metropolitan the amounts of imported water that they have stored in local reservoirs and groundwater basins by direct and in-lieu means.

The economic incentive offered by the Replenishment Service rate is intended to encourage local agencies to invest in new water production, storage, treatment and transmission facilities—thus reducing reliance on Metropolitan during times of shortage. By drawing upon water stored under the Replenishment Service Program, shortages can be mitigated through local withdrawal actions. Furthermore, non-participating agencies benefit by the freeing up of water that would otherwise be used by participating agencies.

The General Manager may terminate Replenishment Service for direct reservoir and groundwater replenishment upon 24 hours notice. Service for in-lieu groundwater or reservoir replenishment may be terminated upon 48 hours notice.

Implementation Issues

Metropolitan staff is currently working closely with member agencies to accurately assess regional groundwater conditions to guide future program implementation steps and to upgrade implementation methods for the Local Resources Program. Staff is also working closely with member agencies on developing solutions for seawater desalination. Project implementation in all of these categories is challenged by treatment and water production capital financing, rising energy costs, public acceptance of treated water (especially recycled water and use of contaminated groundwater resources), and regulatory and permitting hurdles. Additionally, groundwater adjudication and basin management rules need to be addressed when developing new groundwater projects.

Policy

By Minute Item 43021, dated June 9, 1998, the Board approved the Local Resources Program.

By Minute Item 44578, dated Aug. 20, 2001, the Board approved the Seawater Desalination Program and Administrative Guidelines.

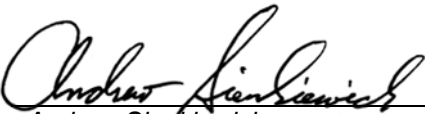
By Minute Item 45841, dated July 13, 2004, the Board adopted the Integrated Water Resources Program Update.

Chapter 9, Sections 4900-4906 of the *Administrative Code of The Metropolitan Water District of Southern California*, authorizes the Interim Agricultural Water Program.


Chapter 9, Section 4514 of the *Administrative Code of The Metropolitan Water District of Southern California*, authorizes replenishment service subject to specified conditions.

Fiscal Impact

None



Andrew Sienkiewich 2/16/2007
for Stephen N. Arakawa Date
Manager, Water Resource Management



Jeffrey Kightlinger 2/20/2007
General Manager Date

Attachment 1 – Local Resources Program Principles

Attachment 2 – Metropolitan-Assisted Local Resources Program Summary

Attachment 3 – Seawater Desalination Program Administrative Guidelines

Attachment 4 – Interim Agricultural Water Program Service Regulations

Attachment 5 – Replenishment Service

BLA #4997

The Metropolitan Water District of Southern California

Local Resources Program Principles

November 4, 1997

The Rate Refinement Participants offer the following principles for consideration and approval by the Metropolitan Water District's (MWD) Board of Directors. Upon board adoption of these principles, MWD staff will work with the member agencies to develop administrative rules. A recommended set of actions and administrative rules to guide implementation of the LRP will then be forwarded to the Board for final approval.

1. Key goals of the proposed LRP are to:
 - a. Assist local projects that improve regional water supply reliability and avoid or defer MWD capital expenditures;
 - b. Emphasize cost-efficient participation in developing local water resources;
 - c. Schedule project production to meet periodically updated IRP local resource targets;
 - d. Minimize administrative cost and complexity;
 - e. Provide equitable project diversity at the regional level; and
 - f. Participate in local project feasibility studies within a specified budget amount.

2. For LRP projects that reduce future MWD capital expenditures and water supply costs, MWD will provide up to \$250 per acre-foot of production for agreement terms up to 25 years. Where project benefits are less, commensurately lower MWD contributions would be applied.

3. An advisory committee shall be established to evaluate applications and make recommendations on proceeding with projects based on a balanced assessment of project attributes. The purpose of the committee is to provide an objective and independent review of proposed projects. Preference will be given to projects based on the following ranking factors.
 - a. Readiness to proceed – projects positioned to proceed into construction and operation on a timely basis;
 - b. Diversity of supply – projects that increase the diversity of supply at the local level;
 - c. Regional water supply benefits – projects that offset a demand for imported supplies or increase regional reliability during periods of shortage and/or emergencies;
 - d. Water quality benefits – project water quality improvements that sustain or augment resource production;
 - e. MWD facility benefits – projects that avoid, defer or reduce the cost of MWD's treatment and distributional systems;
 - f. Operational reliability and probability of success – projects with secured funding, regulatory approvals, firm markets and superior operational reliability;

- g. Increased beneficial uses – projects leading the way to increased public acceptance of expanded uses; and
- h. Cost-effectiveness – projects that minimize costs and maximize yield to MWD over the life of the project agreement.

MWD's Board will need to approve the weighting of these factors during adoption of the rules or upon recommendation of the advisory committee.

4. Project participation shall be subject to MWD Board approval.
5. LRP agreements shall include water production performance targets to achieve cost-efficiency and reliability production.
6. As a transition procedure, Groundwater Recovery Program applications received before December 1, 1997 and Local Projects Program applications received before August 1, 1995 are grandfathered and not subject to the new review process; however, agreement for these applications must be executed within 12 months of board adoption of these LRP Principles. Grandfathered applications that fail to meet the agreement execution deadline and all other applications will be evaluated under new LRP rules.
7. Agencies with existing temporary LRP advance conversion amendments shall have the option to convert to the final LRP under the following conditions:
 - a. Existing contract limits shall be recognized;
 - b. Projects shall not be subject to the evaluation process described in Principle #3;
 - c. The sliding scale methodology used for calculating the MWD Contribution under the temporary LRP amendments shall remain in effect permanently;
 - d. Contract shall include applicable administrative terms consistent with the final LRP; and
 - e. Production schedules shall be provided by the agencies consistent with Principle #5.

The principles outlined above are supported by the Rate Refinement Participants for consideration by Metropolitan Water District's Board of Directors.

Metropolitan-Assisted Local Resources Program Summary*

	Recovered Groundwater	Recycled Water	Total
Projects			
Active Contracts	19	55	74
Operating Projects	17	44	61
Concluded Contracts	5	7	12
Contract Yield (AFY)	87,026	280,300	367,326
Deliveries (AF)**			
FY 06/07 to Date	23,206	50,524	73,731
FY 05/06	44,478	82,058	126,536
Since Inception***	328,982	868,019	1,197,001
Payments (\$ millions)**			
FY 06/07 to Date	\$4.5	\$9.6	\$14.1
FY 05/06	\$9.4	\$15.9	\$25.3
Since Inception***	\$66.2	\$163.1	\$229.4

*Payments are estimated until actual costs are reconciled. Deliveries include data for inactive contracts.

**Deliveries and payments are as reported through January 2007.

***Includes programs initiated under the Local Projects Program.

SEAWATER DESALINATION PROGRAM ADMINISTRATIVE GUIDELINES¹

- A. Policy Principles and Action Program
- B. Integrated Resources Plan Targets
- C. Request for Proposals
- D. Evaluation and Selection Process
- E. Criteria for Review Committee Evaluation
- F. Performance Provisions
- G. California Environmental Quality Act
- H. Metropolitan Board Approval
- I. Reporting Requirements

¹ By Minute Item 44578, dated August 20, 2001, the Board approved Administrative Guidelines for the Saltwater Desalination Program.

A. Policy Principles and Action Plan

In February 2001, Metropolitan's Board of Directors (Board) adopted policy principles which define a strategy for the development of brackish and seawater desalination. Subsequently, staff developed an action plan in May 2001 for development of seawater desalination in Metropolitan's service area. The policy principles and action plan have served as tenets for defining administrative guidelines for the development of cost-effective seawater desalination in a manner consistent with the region's overall water supply reliability needs. Key goals are:

- Assist local projects that improve regional water supply reliability and avoid or defer MWD capital expenditures;
- Emphasize cost-efficient participation in projects;
- Financial assistance to sponsoring member agencies of up to \$250 per acre-foot based on project production for agreement terms up to 25 years; and
- Schedule project production according to regional need.

Participation in specific projects would be recommended by a review committee based on its assessment of project attributes under a competitive solicitation process. The commitment to participate in each project will be subject to board approval. Agreements will include performance provisions to emphasize cost-efficiency and reliable production.

B. Integrated Resources Plan Targets

Metropolitan's Integrated Resources Plan (IRP) identified goals for a diverse mix of six local and imported water resource elements optimized to meet future supply reliability in a cost-effective manner. The IRP sets initial targets for resource development that the region must achieve for water supply reliability through the year 2020.

Staff has identified a preliminary seawater desalination target for a competitive solicitation process. Program implementation, subject to board approval, would initially pursue up to 50,000 acre-feet per year of sustained production and count towards a future seawater desalination target to be established as part of the IRP update.

C. Request for Proposals

Metropolitan would invite participation in the seawater desalination program through a competitive solicitation process. The program would be open to public and private water entities. Proposals for consideration must be made through and supported by a Metropolitan member agency.

It is anticipated that Metropolitan would issue a Request for Proposals (RFP) for seawater desalination development in November 2001 with proposals due at the end of the fiscal year. Respondents will be required to submit statements of interest within three months following the November 2001 issuance of the RFP. The RFP will include a summary of draft agreement items that will serve as the basis for entering into a joint participation agreement. Specific respondents that are most responsive to the RFP in their statements of interest will then be invited to submit detailed proposals. Proposals would be due at the end of the fiscal year.

D. Evaluation and Selection Process

Statements of interest and proposals will be objectively evaluated by a review committee to identify a project or mix of projects that best meets the region's needs and provides the best return on investment consistent with the

RFP. The committee would have the discretion to recommend a project mix that meets more or less than the targeted production amounts.

E. Criteria for Review Committee Evaluation

Project sponsors will be invited to submit proposals for evaluation by the review committee using criteria that may include but is not limited to the following:

- Regional water supply benefits
- Regional MWD facility benefits
- Cost to Metropolitan
- Operational reliability
- Project feasibility

Weighting for each ranking factor will be developed and provided in the RFP based on current water resource planning objectives. The review committee may apply its judgment in recommending a project or mix of projects that best serve the region. For each specified criterion, comment and scoring guidelines would be provided to the review committee to assist in evaluating project proposals and preparing written comments.

F. Performance Provisions

Performance provisions would be incorporated into all seawater desalination agreements. These provisions would allow Metropolitan to adjust or withdraw financial commitments to projects that fail to meet development and production targets. Key milestones include start of construction, start of production and minimum production targets at specified periods throughout the term of the agreement. Failure to meet the performance provisions would result in adjustments to the amount of production Metropolitan would support and in extreme cases, withdrawal of Metropolitan's financial commitment to the project.

G. California Environmental Quality Act

Project sponsors would be responsible for developing environmental documentation, in compliance with the California Environmental Quality Act (CEQA), associated with their proposed projects. Metropolitan would function as a Responsible Agency, as defined by CEQA, for such projects due to its financial contribution to proposed seawater desalination projects. Metropolitan's Board would be required to review and consider information contained in each prospective project's environmental documentation prior to approving Metropolitan's participation in that project.

H. Metropolitan Board Approval

Staff would report the review committee's findings by September 2002 and seek board approval to proceed with the shortlisted projects under the RFP and finalize agreement terms. Projects would then be submitted to the Board for approval on an individual project basis upon completion of environmental documentation. It is estimated that proposal review and agreement negotiations would take about a year to complete followed by up to three years of detailed design and construction. Based on this preliminary schedule, project production could occur by 2007. A deadline date for executing agreements will be established after which project proponents would have to resubmit their project proposals to subsequent RFPs in order to be considered for participation.

I. Reporting Requirements

To help streamline the Board's agenda, quarterly progress reports and updates will be made to the Board's Water Planning, Quality and Resources Committee.

Interim Agricultural Water Program Service Regulations¹

Sec.

- 4900. Interim Agricultural Water Program Term
- 4901. Maximum Amount of Annual Water Deliveries
- 4902. Member Public Agency Certifications
- 4903. Program Review
- 4904. Member Public Agency Plan to Meet Mandatory Cuts to Interim Agricultural Water Program
- 4905. Interim Agricultural Water Program Reductions During a Shortage
- 4906. Agencies to Pass Through Entire Interim Agricultural Water Program Discount

§ 4900. Interim Agricultural Water Program Term.

The Interim Agricultural Water Program (Program) is an interim program for service of water for agricultural purposes as described in Section 4106 and shall be governed by the Metropolitan Water District Act, this Chapter 9 and other applicable provisions of this Division IV.

§ 4901. Maximum Amount of Annual Water Deliveries.

The maximum amount of water delivered annually under the Program available to each member public Agency under the Program is as follows:

Member Public Agency	Maximum Annual Amount of Interim Agricultural Water Program Discount Water Member Public Agency May Purchase (acre-feet)
Anaheim	115
Calleguas MWD	7,164
Inland Empire Utilities Agency	122
Eastern MWD	6,761
Fullerton	60
Las Virgenes MWD	207
MWD of Orange County	7,657
San Diego CWA	100,459
Three Valleys MWD	106
Torrance	22
West Basin MWD	170
Western MWD	<u>32,347</u>
Total	155,190

§ 4902. Member Public Agency Certification

Member Public Agencies shall provide monthly interim Agricultural Water Program certifications in conformance with Section 4507.

¹ The Metropolitan Water District Administrative Code, Sections 4900-4906.

§ 4903. Program Reviews.

The Program will be reviewed by Metropolitan at the end of each fiscal year in accordance with Section 4507. Member public agencies shall provide to Metropolitan the following monthly information: (1) total water use, (2) Metropolitan deliveries, (3) local water use, (4) Metropolitan deliveries to agriculture for Interim Agricultural Water Program purposes and any other information the General Manager deems necessary to complete the review. Reviews may be provided sooner or more frequently if requested by the member public agency or Metropolitan.

§ 4904. Member Public Agency Plan to Meet Mandatory Cuts to Interim Agricultural Water Program.

On or before November 30, 1994, each member public agency which plans to participate in the Program shall submit a written plan to Metropolitan showing how it will meet the mandatory cuts to Interim Agricultural Program during a shortage. The plan shall describe the member agency's drought management strategy and how it plans to either cut back Interim Agricultural Water Program water or use local resources to supply agriculture being supplied by Interim Agricultural Water Program water during a shortage.

§ 4905. Interim Agricultural Water Program Reductions During a Shortage.

Should a supply shortage occur, the General Manager may exercise discretion to reduce Interim Agricultural Water Program deliveries up to 30 percent prior to imposing any mandatory allocation under the Water Surplus and Drought Management Plan.

As soon as practical after the General Manager makes a determination to reduce or interrupt delivery of water for Interim Agricultural Water Program service, the General Manager shall give written notice of such determination to affected member public agencies.

§ 4906. Agencies to Pass Through Entire Interim Agricultural Water Program Discount

The member public agency shall pass the entire Interim Agricultural Water Program discount through to its subagencies, and shall use its best efforts to assure that its subagencies pass the entire discount through to the Interim Agricultural Water Program user.

Replenishment Service

§ 4514. Replenishment Service.¹

(a) General – The goals of the Replenishment Service program are to:

1. Achieve greater conjunctive use of imported and local supplies.
2. Encourage construction of additional local production facilities.
3. Reduce member agencies' dependence on deliveries from Metropolitan during periods of shortage.

Member agencies are encouraged to take replenishment water through a discounted rate offered by Metropolitan. This economic incentive encourages local agencies to invest in new water production, storage, treatment and transmission facilities, or to fully utilize existing facilities. These facilities are needed to augment local agencies' capability to produce local water, as well as store imported water purchased from Metropolitan during periods of abundance.

To receive the lower rates, agencies must certify to Metropolitan the amounts of imported water that they have stored in local reservoirs and groundwater basins by direct and in-lieu means. Certification forms are provided to agencies to assist in their calculations and standardize the certifications. Agencies shall comply with the administrative procedures as set forth in the most current Replenishment Service Handbook, as amended from time to time by the General Manager, to receive the Replenishment Service rate on water purchased from Metropolitan.

(b) Storage types – Replenishment Service water shall be stored for long-term storage. Long-term storage is that water delivered by Metropolitan to a member public agency or subagency for storage, by direct or in-lieu methods, beyond a 12-month period. Under this concept, total annual purchases from Metropolitan increase by the amount of Replenishment Service water purchased. Water that an agency leaves in storage to replace groundwater overdraft in any previous drought year when Replenishment Service was declared unavailable is considered long-term storage.

(c) Normal Period of Availability – Replenishment Service water service shall be available between July 1 through June 30 whenever and so long as the General Manager determines that water and system capacity are available. If required for Metropolitan's system regulation, groundwater replenishment by spreading or injecting or water deliveries/sales pursuant to any storage or operating agreement, may be offered to specific member public agencies during any time of the year at the Replenishment Service rate at the General Manager's discretion. If an agency should take Replenishment Service water when it is deemed not available by the General Manager then it shall pay the rates for that water set forth in Section 4401(a)(1). With respect to service for direct reservoir replenishment and for groundwater replenishment by spreading or injecting, service availability may be activated or terminated immediately upon notice by the General Manager to affected member public agencies. With respect to service for in-lieu groundwater replenishment or in-lieu reservoir replenishment, service availability may be activated upon notice to the member public agencies and terminated upon 48 hours notice to the member public agencies.

(d) Certification – Member public agencies may receive Replenishment Service only upon filing of the required certification specified in Section 4507. All certifications as to the storage of water Replenishment Service must be on forms provided by the District or in electronic format acceptable to the District. Receipt of a certification electronically by computer modem or otherwise shall be considered identical to receipt of a written

¹ The Metropolitan Water District Administrative Code, Section 4514.

and signed certification binding on the member public agency for all purposes. The General Manager may make or cause to be made such investigations as the General Manager may require in order to determine the quantities of water to which the Replenishment Service rates shall apply. Such investigations may result in revisions either upward or downward in the amount of water actually received in Replenishment Service. No such investigation shall be made unless the member public agency has requested Replenishment Service and submitted the requisite certifications. The General Manager may reject any certification if the certifying agency is unable to furnish sufficient documentation as to the facts of the certification.