

APPENDIX A

Regulatory History

Colorado River Basin Salinity Control Act
as Amended

REGULATORY HISTORY

(Does not exist in current CFR)

Title 40 - Protection of Environment
Chapter 1 - ENVIRONMENTAL PROTECTION AGENCY
[FBL 298-5]
Part 120 - WATER QUALITY STANDARDS

Colorado River Systems; Salinity Control Policy and Standards Procedures

The purpose of this notice is to amend 40 CFR Part 120 to set forth a salinity control policy and procedures and requirements for establishing water quality standards for salinity and a plan of implementation for salinity control in the Colorado River System which lies within the State of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming pursuant to section 303 of the Federal Water Pollution Control Act, as amended (33 U.S. C. 1313). A notice proposing such policy and standards procedures was issued on June 10, 1974 (39 FR 20703, 39 FR 24517).

High salinity (total dissolved solids) is recognized as a significant water quality problem causing adverse impacts on water uses. Salinity concentrations are affected by two basic processes: (a) Salt loading - the addition of mineral salts from various natural and man-made sources, and (b) salt concentrating - the Loss of water from the system through stream depletion.

Studies to date have demonstrated that the high salinity of stream systems can be alleviated. Although further study may be required to determine the economic and technical feasibility of controlling specific sources, sufficient information is available to develop a salinity control program.

Salinity standards for the Colorado River System would be useful in the formulation of an effective salinity control program. In developing these standards, the seven States must cooperate with one another and the Federal Government to support and implement the conclusions and recommendations adopted April 27, 1972, by the reconvened 7th Session of the conference in the Matter of Pollution of the Interstate Waters of the Colorado River and its Tributaries.

Public hearings on the proposed regulation were held in Las Vegas, Nevada on August 19, 1974, and in Denver, Colorado, on August 21, 1974. Public comments were provided at the hearings and also by letter during the review period. A summary of major comments and Environmental Protection Agency response follows:

(1) The Colorado River Basin Salinity Control Forum stated that it did not object to the proposed regulations, and believed that it satisfied the requirements of section 303 (b)(2) of P.L. 92-500 until October 18, 1975. The Forum reported that the seven Colorado River Basin States were

actively working on the development of water quality standards and a plan of implementation of salinity control.

(2) The Colorado River Water Conservation District inquired as to whether the definition for the Colorado River Basin contained in Article II(f) of the Colorado River Compact of 1922 would be followed in the development of salinity standards and the salinity control plan.

The requirement of establishing water quality standards and an implementation plan apply to the Colorado River System as defined in Part 120.5(a) of this regulation. This definition is consistent with the definition of the Colorado River System contained in Article II(f) and II(g) define the Basin to include the System plus areas outside the drainage area which are served by the Colorado River System. The Environmental Protection Agency (EPA) will require that the standards and implementation plan consider the impacts of basinwide uses, e.g. transmountain diversions, on salinity effects in the System, but the establishment of standards and implementation plans pursuant to this regulation will not be required for streams located outside the System.

The District also questioned the feasibility of relying on irrigation improvement programs as a means of alleviating the salinity problem.

EPA believes that adequate information is available to initiate controls for irrigated agriculture, yet at the same time acknowledges that additional work is needed to demonstrate the efficacy of certain control measures. Projects presently being supported by EPA and others should demonstrate the adequacy of various control measures including management and non-structural techniques. These measures will be considered during the development of the implementation plan.

(3) The Environmental Defense Fund (EDF) testified that it believed that EPA was not complying with the requirements of the Federal Water Pollution Control Act, as amended, chiefly because of EPA's late response to the timetable delineated in the Act for establishing standards, and also because numerical standards still have not been set for the Colorado River System. EDF called upon EPA to withdraw the proposed regulation and promptly promulgate numerical limits for salinity.

EPA believes that a move to promulgate numerical standards at this time should cause even further delays in controlling salinity due to the problems involved with obtaining interstate cooperation and public acceptance of such a promulgation.

(4) The Sierra Club raised a number of objections to the proposed regulation, principally because, in its opinion, it permits further development of the water of the Colorado River without requiring that adequate salinity controls be on line prior to development. Specific suggestions are:

(a) Section 120.5(e)(3). Shorten the deadline for submission of the standards and implementation plan to May 30, 1975.

EPA believes that this would not allow adequate time due to the complexities of the problem, the interstate coordination needed and the time requirements for public hearings. The October 18, 1975 date is consistent with the requirements of the Federal Water Pollution Control Act, as amended, for the three year review and revision of standards. The schedule set forth by the Colorado River Basin Salinity Control Forum calls for development of draft standards and an implementation plan by February 1975 in order to allow time for public participation prior to promulgation.

(b) Section 120.5(c)(2). Delete “as expeditiously as practicable.”

The date of July 1, 1983, remains the goal for accomplishment of implementation plans as stated in § 120.5(c)(2)(iii). It is the purpose of this language to accelerate progress by the States toward this goal where possible.

(c) Delete “while the basin States continue to develop their compact apportioned waters.”

In recognition of the provisions of the Colorado River Compact of 1922 and until such time that the relationship between the Compact and the Federal Water Pollution Control Act, as amended, is clarified, EPA believes that development may proceed provided that measures are taken to offset the salinity increases resulting from further development.

(d) Section 120.5(c)(2)(iv). Add language to describe conditions under which temporary increases above the 1972 levels will be allowed.

EPA believes that this matter should be addressed in further detail in the formulation review and acceptance of the implementation plan, not in the regulation.

(e) Add a new subsection on financing on control measures.

EPA believes that this, too, is an issue that should be handled as part of the implementation plan.

(f) Add a new subsection delineating requirements for evaluating control plans and restricting consideration of controls for the Blue Spring on the Little Colorado River.

EPA believe these issues should also be addressed as part of the implementation plan. It should be noted that nothing in this regulation removes the requirement for assessing environmental impacts and preparing environmental impact statements for control measures.

(g) Add a new section requiring public hearings.

EPA’s public participation regulations appear at 40 CFR 105 and apply to all actions to be taken by the States and Federal Government pursuant to the Act. States have provided for public

participation throughout the initial water quality standards review process. We expect the States to do so in this situation and see no need to set forth additional requirements.

(h) Add a new section stating that the implementation plan will be published in the Federal Register.

EPA expects there will be substantial public participation at the State and local level prior to adoption of the plan. The salinity standards are expected to be published in the Federal Register, but the size and complexity of the plan may militate against its publication. At the very least, the plan will be available for review at appropriate EPA and State offices. Notice of its availability will be published in the Federal Register, and 60 days will be allowed for public review and comment.

(i) Add new subsection stating that EPA will promulgate standards if the States fail to do so as prescribed in this regulation.

Section 303 of the Federal Water Pollution Control Act provides for promulgation by EPA where the States fail to adopt standards requested by the Administrator, or where the Administrator determines Federal promulgation is necessary to carry out the purpose of the Act. EPA's responsibility to promulgate standards if the States fail to do so is thus expressed in the Statute itself; the Agency does not believe that recitation of the statutory duty in this particular rulemaking is necessary.

(5) The American Farm Bureau Federation, California Farm Bureau Federation, Nevada Farm Bureau Federation, and the New Mexico Farm and Livestock Bureau believe that standards should not be set until further evaluation of the problems and opportunities for control are completed.

EPA believes that adequate information is available for setting standards and formulation controls, and while it recognizes that additional work is needed on specific aspects of solutions, it believes that further delay without any action is not appropriate.

Records of the hearings and comments received by letter during the review period are available for public inspection at the regional offices of the Environmental Protection Agency at 1860 Lincoln Street in Denver, Colorado, at 100 California Street in San Francisco, California, at 1609 Patterson Street in Dallas, Texas, and at the Environmental Protection Agency Freedom of Information Center at 401 M Street SW in Washington, D.C.

This regulation sets forth a policy of maintaining salinity concentrations in the lower main stem of the Colorado River at or below 1972 average levels and requires the Colorado River System States to promulgate water quality standards. The first step will be the establishment of procedures within 30 days of the effective date of these regulations which will lead to adoption on or before October 18, 1975, of water quality standards for salinity including numeric criteria and an implementation plan of salinity control.

Except as provided in this regulation the interstate and intrastate standards previously adopted by the States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming and approved by the Environmental Protection Agency are the effective water quality standards under section 303 of the Act for interstate and intrastate waters within those States. Where the regulations set forth below are inconsistent with the referenced state standards, these regulations will supersede such standards to the extent of the inconsistency.

In consideration of the foregoing, 40 CFR Part 120 is amended as follows:

1. Section 120.5 is added to read as set forth below:

§ 120.5 Colorado River System Salinity Standards and Implementation Plan.

(a) "Colorado River System" means that portion of the Colorado River and its tributaries within the United States of America.

(b) It shall be the policy that the flow weighted average annual salinity in the lower main stem of the Colorado River System be maintained at or below the average value found during 1972. To carry out this policy, water quality standards for salinity and a plan of implementation for salinity control shall be developed and implemented in accordance with the principles of paragraph (c) below.

(c) The States of Arizona, California, Colorado, Nevada, New Mexico, Utah and Wyoming are required to adopt and submit for approval to the Environmental Protection Agency on or before October 18, 1975:

(1) Adopted water quality standards for salinity including numeric criteria consistent with the Policy stated above for appropriate points in the Colorado River System; and

(2) A plan to achieve compliance with these standards as expeditiously as practicable providing that :

(i) The plan shall identify State and Federal regulatory authorities and programs necessary to achieve compliance with the plan.

(ii) The salinity problem shall be treated as a basinwide problem that needs to be solved in order to maintain lower main stem salinity at or below 1972 levels while the basin States continue to develop their compact apportioned waters.

(iii) The goal of the plan shall be to achieve compliance with the adopted standards by July 1, 1983. The date of compliance with the adopted standards shall take into account the necessity for Federal salinity control actions set forth in the plan. Abatement measures within the control for the States shall be implemented as soon as practicable.

(iv) Salinity levels in the lower main stem may temporarily increase above the 1972 levels if control measures to offset the increases are included in the control plan. However, compliance with 1972 levels shall be a primary consideration.

(v) The feasibility of establishing an interstate institution for salinity management shall be evaluated.

(d) The States are required to submit to the respective Environmental Protection Agency Regional Administrator established procedures for achieving (c)(1) and (c)(2) above within 30 days of the effective date of these regulations and to submit progress reports quarterly thereafter. EPA will on a quarterly basis determine the progress being made in the development of salinity standards and the implementation plan.

§ 120.10 [Amended]

§ 120.10 is amended by adding to the paragraphs entitled "Arizona", "California", "Colorado", "Nevada", "New Mexico", "Utah", and "Wyoming" a salinity control policy and procedures and requirements for establishing water quality standards for salinity control in the Colorado River System.

(Sec. 303, Pub. L. 82-500, 56 Stat. 816 (33 U.S.C. 1313))

Effective date: December 18, 1974.

Dated: December 11, 1974

COLORADO RIVER BASIN

SALINITY CONTROL

ACT

TITLE II

Public Law 93-320, "COLORADO RIVER BASIN SALINITY CONTROL ACT," Approved June 24, 1974.

AS AMENDED BY:

Public Law 98-569, "AN ACT TO AMEND THE SALINITY CONTROL ACT," Approved October 30, 1984.

Public Law 104-20, "AN ACT TO AMEND THE SALINITY CONTROL ACT," Approved July 28, 1995.

Public Law 104-127, "FEDERAL AGRICULTURE IMPROVEMENT AND REFORM ACT OF 1996," Approved April 4, 1996.

Public Law 106-459, "AN ACT TO AMEND THE SALINITY CONTROL ACT," Approved November 7, 2000.

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COLORADO RIVER BASIN SALINITY CONTROL ACT
(AS AMENDED)

Public Law 93-320
as amended by
Public Laws
98-569, 104-20, 104-127

An Act to authorize the construction, operation, and maintenance
of certain works in the Colorado River Basin to control
the salinity of water delivered to users in the
United States and Mexico.

TITLE II--MEASURES UPSTREAM FROM IMPERIAL DAM

Section 201

- (f) The Secretary of the Interior shall implement the salinity control policy adopted for the Colorado River in the "Conclusions and Recommendations" published in the Proceedings of the Reconvened Seventh Session of the Conference in the Matter of Pollution of the Interstate Waters of the Colorado River and Its Tributaries in the States of California, Colorado, Utah, Arizona, Nevada, New Mexico and Wyoming, held in Denver, Colorado on April 26-27, 1972, under the authority of section 10 of the Federal Water Pollution Control Act (33 U.S.C. 1160), and approved by the Administrator of the Environmental Protection Agency on June 9, 1972.
- (g) The Secretary is hereby directed to expedite the investigation, planning, and implementation of the salinity control program generally as described in chapter VI of the Secretary's report entitled, "Colorado River Water Quality Improvement Program, February 1972." In determining the relative priority of implementing additional units or new self-contained portions of units authorized by section 202, the Secretary or the Secretary of Agriculture, as the case may be, shall give preference to those additional units or new self-contained portions of units which reduce salinity of the Colorado River at the least cost per unit of salinity reduction.
- (h) In conformity with section 201(a) of this title and the authority of the Environmental Protection Agency under Federal laws, the Secretary, the Administrator of the Environmental Protection Agency, and the Secretary of Agriculture are directed to cooperate and coordinate their activities effectively to carry out the objective of this title.

Section 202

- (a) The Secretary is authorized to construct, operate, and maintain the following salinity control units and salinity control program as the initial stage of the Colorado River Basin salinity control program:

(1) The **Paradox Valley** unit, Montrose County, Colorado, consisting of facilities for collection and disposition of saline ground water of Paradox Valley, including wells, pumps, pipelines, solar evaporation ponds, and all necessary appurtenant and associated works such as roads, fences, dikes, power transmission facilities, and permanent operating facilities, and consisting of measures to replace incidental fish and wildlife values foregone.

(2) The **Grand Valley** unit, Colorado, consisting of measures and all necessary appurtenant and associated works to reduce the , seepage of irrigation water from irrigated lands of Grand Valley into the ground water and thence into the Colorado River. Measures shall include lining of canals and laterals, replacing canals and laterals with pipe, combining of existing canals and laterals into fewer and more efficient facilities, implementing other measures to reduce salt contributions from the Grand Valley to the Colorado River, and implementing measures to replace incidental fish and wildlife values foregone. Prior to initiation of construction of the Grand Valley Unit, or portion thereof, the Secretary shall enter into contracts through which the non-federal entities owning, operating, and maintaining the water distribution, systems, or portions thereof, in Grand Valley, singly or in concert, will assume the obligations specified in subsection (b)(2) relating to the continued operation and maintenance, of the unit's facilities to the end that the maximum reduction of salinity inflow to the Colorado River will be achieved.

PL 98-569 deleted authority for the Crystal Geyser Unit.

(3) The **Las Vegas Wash** unit, Nevada, consisting of facilities for collection and disposition of saline ground water of Las Vegas Wash, including infiltration galleries, pumps, desalter, pipelines, solar evaporation facilities, and all appurtenant works including but not limited to roads, fences, power transmission facilities, and operating facilities, and consisting of measures to replace incidental fish and wildlife values foregone.

(4) Stage I of the **Lower Gunnison Basin** Unit, Colorado, consisting of measures and all necessary appurtenant and associated works to reduce seepage from canals and laterals in the Uncompahgre Valley, and consisting of measures to replace incidental fish and wildlife values foregone, essentially as described in the feasibility report and final environmental statement dated February 10, 1984. Prior to initiation of construction of Stage I of the Lower Gunnison Basin Unit, or of a portion of Stage 1, the Secretary shall enter into contracts through which the non-federal entities owning, operating, and maintaining the water distribution systems, or portions thereof, in the Uncompahgre Valley, singly or in concert,

Subsection 202(a) Continued

will assume the obligations specified in subsection (b)(2) relating to the continued operation and maintenance of the Unit's facilities.

Subsection (4) authority was provided by PL 98-569.

(5) Portions of the **McElmo Creek** Unit, Colorado, as components of the Dolores Participating Project, Colorado River Storage Project, authorized by Public Law 90-537 and Public Law 84-485, consisting of all measures and all necessary appurtenant and associated works to reduce seepage only from the Towaoc-Highline combined canal, Rocky Ford Laterals, Lone Pine Lateral, and Upper Hermana Lateral, and consisting of measures to replace incidental fish and wildlife values foregone. The Dolores Participating Project shall have salinity control as a project purpose insofar as these specific facilities are concerned: *Provided*, That the costs of construction and replacement of these specific facilities shall be allocated by the Secretary to salinity control and irrigation only after consultation with the State of Colorado, the Montezuma Valley Irrigation District, Colorado, and the Dolores Water Conservancy District, Colorado: *And provided further*, That such allocation of costs to salinity control will include only the separable and specific costs of these facilities and will not include any joint costs of any other facilities of the Dolores Participating Project. Repayment of costs allocated to salinity control shall be subject to this Act. Repayment of costs allocated to irrigation shall be subject to the Acts which authorized the Dolores Participating Project, the Reclamation Act of 1902, and Acts amendatory and supplementary thereto. Prior to initiation of construction of these specific facilities, or a portion thereof, the Secretary shall enter into contracts through which the non-Federal entities owning, operating, and maintaining the water distribution systems, or portions thereof, in the Montezuma Valley, singly or in concert, will assume the obligations specified in subsection (b)(2) relating to the continued operation and maintenance of the unit's facilities.

(6) A **basinwide salinity control program** that the Secretary, acting through the Bureau of Reclamation, shall implement. The Secretary may carry out the purposes of this paragraph directly, or may make grants, commitments for grants, or advances of funds to non-Federal entities under such terms and conditions as the Secretary may require. Such program shall consist of cost-effective measures and associated works to reduce salinity from saline springs, leaking wells, irrigation sources, industrial sources, erosion of public and private land, or other sources that the Secretary considers appropriate. Such program shall provide for the mitigation of incidental fish and wildlife values that are lost as a result of the measures and associated works. The Secretary shall submit a planning report concerning the program established under this paragraph to the appropriate committees of Congress. The Secretary may not expend funds for any implementation measure under the program established under this paragraph before the expiration of a 30-day period beginning on the date on which the Secretary submits such report.

Subsection (6) authority was provided by PL 104-20.

(b) In implementing the units authorized to be constructed pursuant to subsection (a), the Secretary shall carry out the following directions:

(1) As reports are completed describing final implementation plans for the unit, or any portion thereof, authorized by paragraph (5) of subsection (a), and prior to expenditure of funds for related construction activities, the Secretary shall submit such reports to the appropriate committees of the Congress and to the governors of the Colorado River Basin States.

(2) Non-federal entities shall be required by the Secretary to contract for the long-term operation and maintenance of canal and lateral systems constructed pursuant to activities provided for in subsection (a): *Provided*, That the Secretary shall reimburse such non-federal entities for the costs of such operation and maintenance to the extent the costs exceed the expenses that would have been incurred by them in the thorough and timely operation and maintenance of their canal and lateral systems absent the construction of a unit, said expenses to be determined by the Secretary after consultation with the involved non-federal entities. The operation and maintenance for which non-federal entities shall be responsible shall include such repairing and replacing of a unit's facilities as are associated with normal annual maintenance activities in order to keep such facilities in a condition which will assure maximum reduction of salinity inflow to the Colorado River. These non-federal entities shall not be responsible, nor incur any costs, for the replacement of a unit's facilities, including measures to replace incidental fish and wildlife values foregone. The term replacement shall be defined for the purposes of this title as a major modification or reconstruction of a completed unit, or portion thereof, which is necessitated, through no fault of the non-federal entity or entities operating and maintaining a unit, by design or construction inadequacies or by normal limits on the useful life of a facility. The Secretary is authorized to provide continuing technical assistance to non-federal entities to assure the effective and efficient operation and maintenance of a unit's facilities.

(3) The Secretary may, under authority of this title, and limited to the purposes of this Act, fund through a grant or contract, for any fiscal year only to such extent or in such amounts as are provided in appropriation acts, a non-federal entity to organize private canal and lateral owners into formal organizations with which the Secretary may enter into a grant or contract to construct, operate, and maintain a unit's facilities.

(4) In implementing the units authorized to be constructed or the program pursuant to paragraphs (1), (2), (3), (4), (5), and (6) of subsection (a), the Secretary shall comply with procedural and substantive State water laws.

(5) The Secretary may, under authority of this title and limited to the purposes of this Act, fund through a grant or contract, for any fiscal year only to such extent or in such amounts as are provided in appropriation acts, a non-Federal entity to operate and maintain measures to replace incidental fish and wildlife values foregone.

Subsection 202(b) Continued

- (6) In implementing the units authorized to be constructed pursuant to subsection (a), the Secretary shall implement measures to replace incidental fish and wildlife values foregone concurrently with the implementation of a unit's, or a portion of a unit's, related features.
- (c) The Secretary of Agriculture shall carry out salinity control measures (including watershed enhancement and cost-share measures with livestock and crop producers) in the Colorado River Basin as part of the environmental quality incentives program established under chapter 4 of subtitle D of title XII of the Food Security Act of 1985.

Subsection 202(c) of the 1984 Act was replaced PL 104-127

Section 203

- (a) The Secretary is authorized and directed to--

(1) Expedite completion of the planning reports on the following units, described in the Secretary's report "Colorado River Water Quality Improvement Program, February 1972":

- (i) Irrigation source control:
Lower Gunnison
Uintah Basin
Colorado River Indian Reservation
Palo Verde Irrigation District
- (ii) Point source control:
LaVerkin Springs
Littlefield Springs
Glenwood-Dotsero Springs
- (iii) Diffuse source control:
Price River
San Rafael River
Dirty Devil River
McElmo Creek
Big Sandy River

In addition to the above, PL 96-375 added feasibility study authority for Meeker Dome and Lower Virgin River.

Subsection 203(a) Continued

- (2) Submit each planning report on the units named in section 203(a)(1) of this title promptly to the Colorado River Basin States and to such other parties as the Secretary deems appropriate for their review and comments. After receipt of comments on a unit and careful consideration thereof, the Secretary shall submit each final report with his recommendations, simultaneously, to the President, other concerned Federal departments and agencies, the Congress, and the Colorado River Basin States.
- (b) The Secretary is directed—
- (1) in the investigation, planning, construction, and implementation of any salinity control unit involving control of salinity from irrigation sources, to cooperate with the Secretary of Agriculture in carrying out research and demonstration projects and in implementing on-the-farm improvements and farm management practices and programs which will further the objective of this title;
- (2) to undertake research on additional methods for accomplishing the objective of this title, utilizing to the fullest extent practicable the capabilities and resources of other Federal departments and agencies, interstate institutions, States, and private organizations;
- (3) to develop a comprehensive program for minimizing salt contributions to the Colorado River from lands administered by the Bureau of Land Management and submit a report which describes the program and recommended implementation actions to the Congress and to the members of the Advisory Council established by section 204(a) of this title by July 1, 1987;
- (4) to undertake feasibility investigations of saline water use and disposal opportunities, including measures and all necessary appurtenant and associated works, to demonstrate saline water use technology and to beneficially use and dispose of saline and brackish waters of the Colorado River Basin in joint ventures with current and future industrial water users, using, but not limited to, the concepts generally described in the Bureau of Reclamation Special Report of September 1981, entitled "Saline water use and disposal opportunities"; and
- (5) to undertake advance planning activities on the Sinbad Valley Unit, Colorado, as described in the Bureau of Land Management Salinity Status Report, covering the period 1978-1979 and dated February 1980.

Section 204

- (a)** There is hereby created the Colorado River Basin Salinity Control Advisory Council composed of no more than three members from each State appointed by the Governor of each of the Colorado River Basin States.
- (b)** The Council shall be advisory only and shall--
 - (1)** act as liaison between both the Secretaries of Interior and Agriculture and the Administrator of the Environmental Protection Agency and the States in accomplishing the purposes of this title;
 - (2)** receive reports from the Secretary on the progress of the salinity control program and review and comment on said reports; and
 - (3)** recommend to both the Secretary and the Administrator of the Environmental Protection Agency appropriate studies of further projects, techniques, or methods for accomplishing the purposes of this title.

Section 205

- (a)** The Secretary shall allocate the total costs (excluding costs borne by non-federal participants) of the on-farm measures authorized by section 202(c), of all measures to replace incidental fish and wildlife values foregone, and of each unit or separable feature thereof authorized by section 202(a) of this title as follows:

Subsection (a) modified slightly by PL 104-127

- (1)** In recognition of Federal responsibility for the Colorado River as an interstate stream and for international comity with Mexico, Federal ownership of the lands of the Colorado River Basin from which most of the dissolved salts originate, and the policy embodied in the Federal Water Pollution Control Act Amendments of 1972 (86 Stat. 816), 75 per centum of the total costs of construction, operation, maintenance, and replacement of each unit or separable feature thereof authorized by section 202(a)(1), (2), and (3), including 75 per centum of the total costs of construction, operation, and maintenance of the associated measures to replace incidental fish and wildlife values foregone, 70 per centum of the total costs of construction, operation, maintenance, and replacement of each unit or separable feature thereof authorized by paragraphs (4) through (6) of section 202(a), including 70 per centum of the total costs of construction, operation, and maintenance of the associated measures to replace incidental fish and wildlife values foregone, and 70 per centum of the total costs of implementation of the on-farm measures authorized by section 202(c), including 70 per centum of the total costs of the associated measures to replace incidental

Subsection 205(a) Continued

fish and wildlife values foregone, shall be non-reimbursable. The total costs remaining after these allocations shall be reimbursable as provided for in paragraphs (2), (3), (4), and (5), of section 205(a).

(2) The reimbursable portion of the total costs shall be allocated between the Upper Colorado River Basin Fund established by section 5(a) of the Colorado River Storage Project Act (70 Stat. 107) and the Lower Colorado River Basin Development Fund established by section 403(a) of the Colorado River Basin Project Act (82 Stat. 885), after consultation with the Advisory Council created in section 204(a) of this title and consideration of the following items:

(i) benefits to be derived in each basin from the use of water of improved quality and the use of works for improved water management;

(ii) causes of salinity; and

(iii) availability of revenues in the Lower Colorado River Basin Development Fund and increased revenues to the Upper Colorado River Basin Fund made available under section 205(d) of this title: *Provided*, That costs allocated to the Upper Colorado River Basin Fund under section 205(a)(2) of this title shall not exceed 15 per centum of the costs allocated to the Upper Colorado River Basin Fund and the Lower Colorado River Basin Development Fund.

(3) Costs of construction and replacement of each unit or separable feature thereof authorized by sections 202(a)(1), (2), and (3) and costs of construction of measures to replace incidental fish and wildlife values foregone, when such measures are a part of the units authorized by sections 202(a)(1), (2), and (3);, allocated to the upper basin and to the lower basin under section 205(a)(2) of this title shall be repaid within a fifty-year period or within a period equal to the estimated life of the unit, separable feature thereof, or replacement, whichever is less, without interest from the date such unit, separable feature, or replacement is determined by the Secretary to be in operation.

(4) (i) Costs of construction and replacement of each unit or separable feature thereof authorized by paragraphs (4) through (6) of section 202, costs of construction of measures to replace incidental fish and wildlife values foregone, when such measures are a part of the on-farm measures authorized by section 202(c) or of the units authorized by paragraphs (4) through (6) of section 202, and costs of implementation of the on-farm measures authorized by section 202(c) allocated to the upper basin and to the lower basin under section 205(a)(2) of this title shall be repaid as provided in subparagraphs (ii) and (iii), respectively, of this paragraph.

(ii) Costs allocated to the upper basin shall be repaid with interest within a fifty-year period, or within a period equal to the estimated life of the unit, separable feature thereof, replacement, or on-farm measure, whichever is less, from the date such unit, separable feature thereof, replacement or on-farm measure is determined by the Secretary or Secretary of Agriculture to be in operation.

(iii) Costs allocated to the lower basin shall be repaid without interest as such costs are incurred to the extent that money is available from the Lower Colorado River Basin Development Fund to repay costs allocated to the lower basin. If in any fiscal year the money available from the Lower Colorado River Basin Development Fund for such repayment is insufficient to repay the costs allocated to the lower basin, as provided in the preceding sentence, the deficiency shall be repaid with interest as soon as money becomes available in the fund for repayment of those costs.

(iv) The interest rates used pursuant to this act shall be determined by the Secretary of the Treasury, taking into consideration average market yields on outstanding marketable obligations of the United States; with remaining periods to maturity comparable to the reimbursement period during the month preceding the date of enactment of the act entitled "An Act to amend the Colorado River Basin Salinity Control Act to authorize certain additional measures to assure accomplishment of the objectives of Title II of such Act, and for other purposes" for costs outstanding at that date, or, in the case of costs incurred subsequent to enactment, during the month preceding the fiscal year in which the costs are incurred.

(5) Costs of operation and maintenance of each unit or separable feature thereof authorized by section 202(a) and of measures to replace incidental fish and wildlife values foregone allocated to the upper basin and to the lower basin under section 205(a)(2) of this title shall be repaid without interest in the fiscal year next succeeding the fiscal year in which such costs are incurred. In the event that revenues are not available to repay the portion of operation and maintenance costs allocated to the Upper Colorado River Basin Fund and to the Lower Colorado River Basin Development Fund in the year next succeeding the fiscal year in which such costs are, incurred, the deficiency shall be repaid with interest calculated in the same manner as provided in section 205(a)(4)(iv). Any reimbursement due non-federal entities, pursuant to section 202(b)(2), shall be repaid without interest in the fiscal year next succeeding the fiscal year in which such operation and maintenance costs are incurred.

(b) **(1)** Costs of construction, operation, maintenance, and replacement of each unit or separable feature thereof authorized by section 202(a), costs of construction, operation, and maintenance of measures to replace incidental fish and wildlife values foregone, and costs of implementation of the on-farm measures authorized by section 202(c), allocated for repayment by the lower basin under section 205(a)(2) of this title shall be paid in accordance with subsection 205(b)(2) of this title, from the Lower Colorado River Basin Development Fund.

Subsection 205(b) Continued

- (2) Section 403(g)(2) of the Colorado River Basin Project Act (43 U.S.C. 1543(g)) is hereby amended as follows: strike the word "and" after the word "Act," in line 8; insert after the word "Act," the following "(2) for repayment to the general fund of the Treasury the costs of each salinity control unit or separable feature thereof, the costs of measures to replace incidental fish and wildlife values foregone, and the costs of on-farm measures payable from the Lower Colorado Basin Development Fund in accordance with sections 205(a)(2), 205(a)(3), 205(a)(4), 205(a)(5), and 205(b)(1) of the Colorado River Salinity Control Act and"; and change paragraph (2) to paragraph (3).
- (c) Costs of construction, operation, maintenance, and replacement of each unit or separable feature thereof authorized by section 202(a), costs of construction, operation, and maintenance of measures to replace incidental fish and wildlife values foregone, and costs of implementation of the on-farm measures authorized by section 202(c) allocated for repayment by the upper basin under section 205(a)(2) of this title shall be paid in accordance with section 205(d) of this title from the Upper Colorado River Basin Fund within the limit of the funds made available under section 205(e) of this title.
- (d) Section 5(d) of the Colorado River Storage Project Act (43 U.S.C. 620d(d)(5)) is hereby amended as follows: strike the word "and" at the end of paragraph (3); strike the period after the word "years" at the end of paragraph (4) and insert a semicolon in lieu thereof followed by the word "and"; and add a new paragraph (5) reading:
- "(5) The costs of each salinity control unit or separable features thereof, the costs of measures to replace incidental fish and wildlife values foregone, and the costs of the on-farm measures payable from the Upper Colorado River Basin Fund in accordance with sections 205(a)(2), 205(a)(3), 205(a)(4), 205(a)(5), and 205(c) of the Colorado River Salinity Control Act."
- (e) The Secretary is authorized to make upward adjustments in rates charged for electrical energy under all contracts administered by the Secretary under the Colorado River Storage Project Act (70 Stat. 105, 43 U.S.C. 620) as soon as practicable and to the extent necessary to cover the costs allocated to the Upper Colorado River Basin Fund under section 205(a)(2), and in conformity with section 205(a)(3), section 205(a)(4), and section 205(a)(5) of this title: provided, that revenues derived from said rate adjustments shall be available solely for the construction, operation, maintenance, and replacement of salinity control units, for the construction, operation, and maintenance of measures to replace incidental fish and wildlife values foregone, and for the implementation of on-farm measures in the Colorado River Basin herein authorized.

- (f) The Secretary may expend funds available in the Basin Funds referred to in this section to carry out cost-share salinity measures in a manner that is consistent with the cost allocations required under this section.

Subsection (f) was added by PL 104-127

Section 206

Commencing on January 1, 1975, and every two years thereafter, the Secretary shall submit, simultaneously, to the President, the Congress, and the Advisory Council created in section 204(a) of this title, a report on the Colorado River Salinity Control Program authorized by this title covering the progress of the investigations, planning, and construction of salinity control units for the previous fiscal year, the effectiveness of such units, anticipated work needed to be accomplished in the future to meet the objectives of this title, with emphasis on the needs during the five years immediately following the date of each report, and any special problems that may be impeding progress in attaining an effective salinity control program. Said report may be included in the biennial report on the quality of water of the Colorado River Basin prepared by the Secretary pursuant to section 15 of the Colorado River Storage Project Act (70 Stat. 111; 43 U.S.C. 602n), section 15 of the Navajo Indian irrigation project and the initial stage of the San Juan-Chama Project Act (76 Stat. 102), and section 6 of the Fryingpan-Arkansas Project Act (76 Stat. 393).

Section 207

Except as provided in section 205(b) and 205(d) of this title, with respect to the Colorado River Basin Project Act and the Colorado River Storage Project Act, respectively, nothing in this title shall be construed to alter, amend, repeal, modify, interpret, or be in conflict with the provisions of the Colorado River Compact (45 Stat. 1057), the Upper Colorado River Basin Compact (63 Stat. 31), the Water Treaty of 1944 with the United Mexican States (Treaty Series 994; 59 Stat. 1219), the decree entered by the Supreme Court of the United States in Arizona against California and others (376 U.S. 340), the Boulder Canyon Project Act (45 Stat. 1057) Boulder Canyon Project Adjustment Act (54 Stat. 774; 43 U.S.C. 618a), Section 15 of the Colorado River Storage Project Act (70 Stat. 111; 43 U.S.C. 620n), the Colorado River Basin Project Act (82 Stat. 885), section 6 of the Fryingpan-Arkansas Project Act (76 Stat. 393), section 15 of the Navajo Indian irrigation project and initial stage of the San Juan-Chama Project Act (76 Stat. 102), the National Environmental Policy Act of 1969, the Federal Water Pollution Control Act as amended.

Section 208

- (a) The Secretary is authorized to provide for modifications of the projects authorized by this title as determined to be appropriate for purposes of meeting the objective of this title. No funds for any such modification shall be expended until the expiration of sixty days after the

Subsection 208(a) Continued

proposed modification has been submitted to appropriate committees of the Congress, and not then if disapproved by said Committees, except that funds may be expended prior to the expiration of such sixty days in any case in which the Congress approves an earlier date by concurrent resolution. The Governors of the Colorado River Basin States shall be notified of these changes.

- (b) The Secretary is hereby authorized to enter into contracts that he deems necessary to carry out the provisions of this title, in advance of the appropriation of funds therefor. There is hereby authorized to be appropriated the sum of \$125,100,000 for the construction of the works and for other purposes authorized in section 202(a) or 202(b) of this title, based on April 1973 prices, plus or minus such amounts as may be justified by reason of ordinary fluctuations in costs involved therein, and such sums as may be required to operate and maintain such works. The funds authorized to be appropriated by this section may be used for construction of any or all of the works or portions thereof and for other purposes authorized in subsection (a), including measures as provided for in subsection (b), of section 202 of this title. There is further authorized to be appropriated such sums as may be necessary to pay condemnation awards in excess of appraised values and to cover costs required in connection with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 90-646).

PL 98-569 provided authority but no additional ceiling for Lower Gunnison and McElmo Creek Unit (see solicitors opinion dated October 25, 1989).

- (c) In addition to the amounts authorized to be appropriated under section (b), there are authorized to be appropriated \$175,000,000 for subsection 202(a), including constructing the works described in paragraph 202(a)(6) and carrying out the measures described in such paragraph. Notwithstanding subsection (b), the Secretary may implement the program under paragraph 202(a)(6) only to the extent and in such amounts as are provided in advance in appropriations Acts.

PL 104-20 and PL 106-459 provided additional ceiling for entire USBR program including those units authorized by PL 93-30 and PL 98-569.

Section 209

As used in this title--

- (a) all terms that are defined in the Colorado River Compact shall have the meanings therein defined;
- (b) "Colorado River Basin States" means the States of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.

APPENDIX B

Forum Policies

**POLICY FOR IMPLEMENTATION OF
COLORADO RIVER SALINITY STANDARDS
THROUGH THE NPDES PERMIT PROGRAM**

Adopted by
The Colorado River Basin Salinity Control Forum

February 28, 1977
Revised October 30, 2002

In November 1976, the United States Environmental Protection Agency Regional Administrators notified each of the seven Colorado River Basin states of the approval of the water quality standards for salinity for the Colorado River System as contained in the document entitled "Proposed Water Quality Standards for Salinity Including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975, and the supplement dated August 25, 1975. The salinity standards including numeric criteria and a plan of implementation provide for a flow weighted average annual numeric criteria for three stations in the lower mainstem of the Colorado River: below Hoover Dam, below Parker Dam, and at Imperial Dam.

In 1977, the states of the Colorado River Basin adopted the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program." The Plan of Implementation is comprised of a number of Federal and non-Federal projects and measures to maintain the flow-weighted average annual salinity in the Lower Colorado River at or below numeric criteria at the three stations as the Upper and Lower Basin states continue to develop their compact-apportioned waters. One of the components of the Plan consists of the placing of effluent limitations, through the National Pollutant Discharge Elimination System (NPDES) permit program, on industrial and municipal discharges.

NPDES Policy for Municipal and Industrial Discharges of Salinity in the Colorado River

The purpose of this policy is to provide more detailed guidance in the application of salinity standards developed pursuant to Section 303 and through the NPDES permitting authority in the regulation of municipal and industrial sources. (See Section 402 of the Federal Water Pollution Control Act.) The objective of the policy, as provided in Sections I.A. and I.B., is to achieve "no salt return" whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal discharges. This policy is applicable to discharges that would have an impact, either direct or indirect on the lower mainstem of the Colorado River System. The lower mainstem is defined as that portion of the River from Hoover Dam to Imperial Dam.

NPDES Policies Separately Adopted By The Forum

The Forum developed a separate and specific policy for the use of brackish and/or saline waters for industrial purposes on September 11, 1980. The Forum addressed the issue of intercepted ground water and adopted a specific policy dealing with that type of discharge on October 20, 1982. On October 28, 1988, the Forum adopted a specific policy addressing the water use and discharge associated with fish hatcheries. Each of these separately adopted policies is attached hereto.

NPDES Policies For Specified Industrial Discharges

On October 30, 2002, the Forum amended this policy for implementation of Colorado River salinity standards through the NPDES permit program in order to address the following three additional types of industrial discharges: (1) water that has been used for once-through noncontact cooling water purposes; (2) new industrial sources that have operations and associated discharges at multiple locations; and (3) "fresh water industrial discharges" where the discharged water does not cause or contribute to exceedances of the salinity standards for the Colorado River System. This policy was also amended to encourage new industrial sources to conduct or finance one or more salinity-offset projects in cases where the permittee has demonstrated that it is not practicable to prevent the discharge of all salt from proposed new construction.

Discharges Of Once-Through Noncontact Cooling Water

Section I.C. of this policy has been added to address discharges of water that has been used for once-through noncontact cooling water purposes. The policy for such discharges shall be to permit these uses based upon a finding that the returned water does not contribute to the loading or the concentration of salts in the waters of the receiving stream beyond a *de minimus* amount. A *de minimis* amount is considered, for purposes of this policy, as an average annual increase of not more than 25 milligrams per liter (mg/L) in total dissolved solids measured at the discharge point or outfall prior to any mixing with the receiving stream in comparison to the total dissolved solids concentration measured at the intake monitoring point of the cooling process or facility. This policy is not intended to supersede any other water quality standard that applies to the receiving stream, including but not limited to narrative standards promulgated to prohibit impairment of designated uses of the stream. It is the intent of the Forum to permit the return of once-through noncontact cooling water only to the same stream from which the water was diverted. Noncontact cooling water is distinguished from blowdown water, and this policy specifically excludes blowdown or any commingling of once-through noncontact cooling water with another waste stream prior to discharge to the receiving stream. Sections I.A. and I.B. of this policy govern discharges of blowdown or commingled water.

New Industrial Sources with Operations and Discharges at Multiple Locations under Common or Affiliated Ownership or Management

Recently there has been a proliferation of new industrial sources that have operations and associated discharges at multiple locations. An example is the recent growth in the development of energy fuel and mineral resources that has occurred in the Upper Colorado River Basin. This type of industrial development may involve the drilling of relatively closely spaced wells into one or more geological formations for the purpose of extracting oil, gas or minerals in solution. Large-scale ground water remediation efforts involving multiple pump and treat systems operating for longer than one year may share similar characteristics. With such energy and mineral development and ground water remediation efforts there is the possibility of a single major industrial operation being comprised of numerous individual point source discharges under common or affiliated ownership or management that produce significant quantities of water as a waste product or byproduct over a long period. Given the large areal scope of these types of major industrial sources and the often elevated concentrations of salinity in their produced water, the total amount of salt loading that they could generate may be very large in comparison to the Forum's past and present salt removal projects. Relatively small quantities of this produced water could generate one ton per day in discharges to surface waters. Since salinity is a conservative water quality constituent, such discharges of produced water, if uncontrolled, could have an adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.

These kinds of major industrial sources strain the conventional interpretation of the industrial source waiver for new construction set forth in Section I.A.1.a. of this policy, which authorizes a discharge of salinity from a single point source of up to one ton per day in certain circumstances. The Forum adopted this provision in 1977, well before most of the new major industrial sources that have operations and discharges at multiple locations began to appear in the Colorado River Basin. A new category of industrial sources is, therefore, warranted. NPDES permit requirements for "New Industrial Sources with Operations and Discharges at Multiple Locations under Common or Affiliated Ownership or Management" are set forth in Section I.D. of this policy. These new requirements are intended to apply to new industrial sources with operations that commence discharging after October 30, 2002.

For purposes of interpreting this policy, "common or affiliated ownership or management" involves the authority to manage, direct, superintend, restrict, regulate, govern, administer, or oversee, or to otherwise exercise a restraining or directing influence over activities at one or more locations that result in a discharge of salinity into the Colorado River System. Common or affiliated ownership or management may be through the ownership of voting securities or may be indicated where individual sources are related through one or more joint ventures, contractual relationships, landlord/tenant or lessor/lessee arrangements. Other factors that indicate two or more discharging facilities are under common or affiliated ownership or management include: sharing corporate executive officers, pollution control equipment and responsibilities, common workforces, administrative functions, and/or payroll activities among operational facilities at different locations.

Fresh Water Industrial Discharges

Sections I.A. and I.B. of this policy have been amended to allow the permitting authority to authorize "fresh water industrial discharges" where the discharged water does not cause or contribute to exceedances of the adopted numeric salinity standards for the Colorado River System. Different end-of-pipe concentrations of salinity as shown in Table 1 of the policy, are appropriate for discharges to tributaries depending upon their location within the Basin. The concept of "benchmark concentrations" has been developed in order to address this need for different end-of-pipe concentrations. These benchmark concentrations are not to be interpreted as water quality standards. Rather, they are intended to serve solely for the establishment of effluent limits for implementing the waiver for "fresh water discharges." The allowance for freshwater discharges is intended to preserve flows from discharges in the Basin, which do not cause significant degradation of existing ambient quality with respect to salinity. Operations or individual discharges that qualify for the freshwater waiver shall not be subject to any further limitation on salt loading under this policy.

Salinity-Offset Projects

This policy has been amended to allow the permitting authority to authorize industrial sources of salinity to conduct or finance one or more salinity-offset projects when the permittee has determined that it is not practicable: (i) to prevent the discharge of all salt from proposed new construction; (ii) to reduce the salt loading to the Colorado River to less than one ton per day or 366 tons per year; or (iii) the proposed discharge is of insufficient quality in terms of TDS concentrations that it could be considered "fresh water" as defined below. Presently, the permitting authority can consider the costs and availability of implementing off-site salinity control measures to mitigate the adverse impacts of the permitted salt load. It is not intended that the applicant be required to develop or design an off-site salinity control project or establish a salt bank, but rather to assess the costs of conducting or buying into such projects where they are available. In the future the Forum or another entity may create a trading/banking institution to facilitate the implementation of a salinity-offset program, basin-wide. This would allow industrial sources to conduct or finance the most cost effective project available at the time an offset project is needed regardless of the project's location in the Basin.

**NPDES PERMIT PROGRAM POLICY
FOR IMPLEMENTATION OF COLORADO RIVER SALINITY STANDARDS**

I. Industrial Sources

The Salinity Standards state that "The objective for discharges shall be a no-salt return policy whenever practicable." This is the policy that shall be followed in issuing NPDES discharge permits for all new industrial sources, and upon the reissuance of permits for all existing industrial sources, except as provided herein. The following addresses those cases where "no discharge of salt" may be deemed not to be practicable.

A. New Construction

1. "New construction" is defined as any facility from which a discharge may occur, the construction of which is commenced after October 18, 1975. (Date of submittal of water quality standards as required by 40 CFR 120, December 11, 1974.) Appendix A provides guidance on new construction determination. "A new industrial source with operations and discharging facilities at multiple locations under common or affiliated ownership or management" shall be defined for purposes of NPDES permitting, as an industrial source that commenced construction on a pilot, development or production scale on or after October 30, 2002.

a. The permitting authority may permit the discharge of salt upon a satisfactory demonstration by the permittee that:

- i. It is not practicable to prevent the discharge of all salt from the new construction or,
- ii. In cases where the salt loading to the Colorado River from the new construction is less than one ton per day or 366 tons per year, or
- iii. The proposed discharge from the new construction is of sufficient quality in terms of TDS concentrations that it can be considered "fresh water" that would have no adverse effect on achieving the adopted numeric standards for the Colorado River System. The permitting authority may consider a discharge to be fresh water if the maximum TDS concentration is: (i) 500 mg/L for discharges into the Colorado River and its tributaries upstream of Lees Ferry, Arizona; or, (ii) 90% of the applicable in-stream salinity standard at the appropriate benchmark monitoring station for discharges into the Colorado River downstream of Lees Ferry as shown in Table 1, below

Table 1

	Benchmark Monitoring Station	Applicable Criteria	Freshwater Discharge (mg/L)
1	Colorado River at Lees Ferry, Arizona	N/A	500
2	Colorado River below Hoover Dam	723	650
3	Colorado River below Parker Dam	747	675
4	Colorado River at Imperial Dam	879	790

- b. Unless exempted under Sections I.A.1.a.ii. or iii., above, the demonstration by the applicant must include information on the following factors relating to the potential discharge:
- (i) Description of the proposed new construction.
 - (ii) Description of the quantity and salinity of the water supply.
 - (iii) Description of water rights, including diversions and consumptive use quantities.
 - (iv) Alternative plans that could reduce or eliminate salt discharge. Alternative plans shall include:
 - (A) Description of alternative water supplies, including provisions for water reuse, if any;
 - (B) Description of quantity and quality of proposed discharge;
 - (C) Description of how salts removed from discharges shall be disposed of to prevent such salts from entering surface waters or groundwater aquifers;
 - (D) Costs of alternative plans in dollars per ton of salt removed; and
 - (E) Unless the permitting authority has previously determined through prior permitting or permit renewal actions that it is not practicable to prevent the discharge of all salt from the new construction in accordance with Section I.A.1.a.i., the applicant must

include information on project options that would offset all or part of the salt loading to the Colorado River associated with the proposed discharge or that would contribute to state or interstate salinity control projects or salt banking programs.

- (v) A statement as to the one plan among the alternatives for reduction of salt discharge that is recommended by the applicant and also information demonstrating any of the other evaluated alternatives that were determined to be economically infeasible.
- (vi) Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.

c. In determining what permit conditions shall be required under I.A.1.a.i., above, the permit issuing authority shall consider, but not be limited to the following:

(i) The practicability of achieving no-discharge of salt from the new construction.

(ii) Where "no discharge" is determined not to be practicable:

(A) The impact of the total proposed salt discharge of each alternative on the lower mainstem in terms of both tons per year and concentration.

(B) Costs per ton of salt removed from the discharge for each plan alternative.

(C) Capability of minimizing salinity discharge.

(D) If applicable under I.A.1.b.(iv)(E), costs and practicability of offsetting all or part of the salt load by the implementation of salt removal or salinity control projects elsewhere in the Colorado River Basin. The permittee shall evaluate the practicability of offsetting all or part of the salt load by comparing such factors as the cost per ton of salt removal for projects undertaken by the Colorado River Basin Salinity Control Forum and the costs in damages associated with increases in salinity concentration against the permittee's cost in conducting or buying into such projects where they are available.

iii. With regard to subparagraphs, (b) and (c) above, the permit issuing authority shall consider the compatibility of state water laws with either the complete elimination of a salt discharge or any plan for minimizing a salt discharge.

B. Existing Facilities or any discharging facility, the construction of which was commenced before October 18, 1975

1. The permitting authority may permit the discharge of salt upon a satisfactory demonstration by the permittee that it is not practicable to prevent the discharge of all salt from an existing facility.
2. The demonstration by the applicant must include, in addition to that required under Section I.A.1.b the following factors relating to the potential discharge:
 - a. Existing tonnage of salt discharged and volume of effluent.
 - b. Cost of modifying existing industrial plant to provide for no salt discharge.
 - c. Cost of salt minimization.
3. In determining what permit conditions shall be required, the permit issuing authority shall consider the items presented under I.A.1.c.(ii), and in addition; the annual costs of plant modification in terms of dollars per ton of salt removed for:
 - a. No salt return.
 - b. Minimizing salt return.
4. The no-salt discharge requirement may be waived in those cases where:
 - a. The discharge of salt is less than one ton per day or 366 tons per year; or
 - b. The permitting authority determines that a discharge qualifies for a "fresh water waiver" irrespective of the total daily or annual salt load. The maximum TDS concentration considered to be fresh water is 500 mg/L for discharges into the Colorado River and its tributaries upstream of Lees Ferry, Arizona. For discharges into the Colorado River downstream of Lees Ferry the maximum TDS concentration considered to be a fresh water shall be 90% of the applicable in-stream standard at the appropriate benchmark monitoring station shown in Table 1, above.

C. Discharge of Once-Through Noncontact Cooling Water

1. Definitions:
 - a. The terms "noncontact cooling water" and "blowdown" are defined as per 40CFR 401.11 (m) and (n).

- b. "Noncontact cooling water" means water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product or finished product.
 - c. "Blowdown" means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practice.
 - d. "Salinity" shall mean total dissolved solids as the sum of constituents.
2. Permits shall be authorized for discharges of water that has been used for once-through noncontact cooling purposes based upon a finding that the returned water does not contribute to the loading of salts or the concentration of salts in the waters of the receiving stream in excess of a *de minimis* amount.
 3. This policy shall not supplant nor supersede any other water quality standard of the receiving stream adopted pursuant to the Federal Clean Water Act, including but not limited to impairment of designated uses of the stream as established by the governing water quality authority having jurisdiction over the waters of the receiving stream.
 4. Noncontact cooling water shall be distinguished from blowdown, and Section 1.C. of this policy specifically excludes blowdown or any commingling of once-through noncontact cooling water with another waste stream prior to discharge to the receiving stream. Sections I.A. and I.B. of this policy shall in all cases govern discharge of blowdown or commingled water.
 5. Once-through noncontact cooling water shall be permitted to return only to the same stream from which the water was diverted.
 6. Because the increase in temperature of the cooling water will result in some evaporation, a *de minimis* increase in the concentration of dissolved salts in the receiving water may occur. An annual average increase in total dissolved solids of not more than 25 milligrams per liter (mg/L) measured at the intake monitoring point, as defined below, of the cooling process or facility, subtracted from the effluent total dissolved solids immediately upstream of the discharge point to the receiving stream, shall be considered *de minimis*.
 7. At the time of NPDES discharge permit issuance or reissuance, the permitting authority may permit a discharge in excess of the 25 mg/L increase based upon a satisfactory demonstration by the permittee pursuant to Section 1.A.1.a.
 8. Once-through demonstration data requirements:
 - a. Description of the facility and the cooling process component of the facility.
 - b. Description of the quantity, salinity concentration and salt load of intake water sources.
 - c. Description of the discharge, covering location, receiving waters, quantity of salt load and salinity concentration of both the receiving waters and the discharge.

- d. Alternative plans for minimizing salt discharge from the facility which shall include:
 - (i) Description of alternative means to attain no discharge of salt.
 - (ii) Cost of alternative plans in dollars per ton of salt removed from discharge.
 - (iii) Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- 9. If, in the opinion of the permitting authority, the database for the salinity characteristics of the water source and the discharge is inadequate, the permit will require that the permittee monitor the water supply and the discharge for salinity. Such monitoring program shall be completed in two years and the permittee shall then present the once-through demonstration data as specified above.
- 10. All new and reissued NPDES permits for once-through noncontact cooling water discharges shall require at a minimum semiannual monitoring of the salinity of the intake water supply and the effluent, as provided below.
 - a. The intake monitoring point shall be the point immediately before the point of use of the water.
 - b. The effluent monitoring point shall be prior to the discharge point at the receiving stream or prior to commingling with another waste stream or discharge source.
 - c. Discrete or composite samples may be required at the discretion of the permitting authority, depending on the relative uniformity of the salinity of the water supply.
 - d. Analysis for salinity may be either total dissolved solids or electrical conductivity where a satisfactory correlation with total dissolved solids has been established. The correlation shall be based on a minimum of five different samples.

D. Discharges of Salinity from a New Industrial Source with Operations and Discharging Facilities at Multiple Locations

- 1. The objective for discharges to surface waters from a new industrial source with operations and discharging facilities at multiple locations shall be to assure that such operations will have no adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.
- 2. NPDES permit requirements for a new industrial source with operations and discharging facilities at multiple locations shall be defined, for purposes of establishing effluent limitations for salinity, as a single industrial source if these facilities meet the criteria:

- a. The discharging facilities are interrelated or integrated in any way including being engaged in a primary activity or the production of a principle product; and
 - b. The discharging facilities are located on contiguous or adjacent properties or are within a single production area e.g. geologic basin, geohydrologic basin, coal or gas field or 8 digit hydrologic unit watershed area; and
 - c. The discharging facilities are owned or operated by the same person or by persons under common or affiliated ownership or management.
3. The permitting authority may permit the discharge of salt from a new industrial source with operations and discharging facilities at multiple locations if one or more of the following requirements are met:
 - a. The permittee has demonstrated that it is not practicable to prevent the discharge of all salt from the industrial source. This demonstration by the applicant must include detailed information on the factors set forth in Section I.A.1.b of the Policy for implementation of Colorado River Salinity Standards through the NPDES permit program; with particular emphasis on an assessment of salinity off-set options that would contribute to state or interstate salinity control projects or salt banking programs and offset all or part of the salt loading to the Colorado river associated with the proposed discharge.
 - b. In determining what permit conditions shall be required under I.A.1.a.i., above, the permit issuing authority shall consider the requirement for an offset project to be feasible if the cost per ton of salt removal in the offset project options (i.e. the permittee's cost in conducting or buying into such projects where they are available) is less than or equal to the cost per ton of salt removal for projects undertaken by the Colorado River Basin Salinity Control Forum or less than the cost per ton in damages caused by salinity that would otherwise be cumulatively discharged from the outfalls at the various locations with operations controlled by the industrial source; or
 - c. The permittee has demonstrated that one or more of the proposed discharges is of sufficient quality in terms of TDS concentrations to qualify for a "fresh water waiver" from the policy of "no salt return, whenever practical." An individual discharge that can qualify for a fresh water waiver shall be considered to have no adverse effect on achieving the adopted numeric salinity standards for the Colorado River System.
4. For the purpose of determining whether a freshwater waiver can be granted, the quality of water discharged from the new industrial source with operations and discharging facilities at multiple locations, determined as the flow weighted average of salinity measurements at all outfall points, must meet the applicable benchmark concentration in accordance with Section I.A.1.a.iii., as set forth above.

5. Very small-scale pilot activities, involving 5 or fewer outfalls, that are sited in areas not previously developed or placed into production by a new industrial source operations and discharges at multiple locations under common or affiliated ownership or management, may be permitted in cases where the discharge of salt from each outfall is less than one ton per day or 366 tons per year. However, no later than the date of the first permit renewal after the pilot activities have become part of a larger industrial development or production scale effort, all discharging facilities shall be addressed for permitting purposes as a single industrial source with operations and discharges at multiple locations under common or affiliated ownership or management.
6. The public notice for NPDES permits authorizing discharges from operations at multiple locations with associated outfalls shall be provided promptly and in the most efficient manner to all member states in the Colorado River Basin Salinity Control Forum in relation to this policy.

**POLICY FOR USE OF
BRACKISH AND/OR SALINE WATERS
FOR INDUSTRIAL PURPOSES**

Adopted by
The Colorado River Basin Salinity Control Forum

September 11, 1980

The states of the Colorado River Basin, the federal Executive Department, and the Congress have all adopted as a policy that the salinity in the lower main stem of the Colorado River shall be maintained at or below the flow-weighted average values found during 1972, while the Basin states continue to develop their compact-apportioned waters. In order to achieve this policy, all steps which are practical and within the framework of the administration of states' water rights must be taken to reduce the salt load of the river. One such step was the adoption in 1975 by the Forum of a policy regarding effluent limitations for industrial discharges with the objective of "no-salt return" wherever practicable. Another step was the Forum's adoption in 1977 of the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program." These policies are part of the basinwide plan of implementation for salinity control which has been adopted by the seven Basin states.

The Forum finds that the objective of maintaining 1972 salinity levels would be served by the exercise of all feasible measures including, wherever practicable, the use of brackish and/or saline waters for industrial purposes.

The summary and page 32 of the Forum's 1978 Revision of the Water Quality Standards for Salinity state: "The plan also contemplates the use of saline water for industrial purposes whenever practicable,..." In order to implement this concept and thereby further extend the Forum's basic salinity policies, the Colorado River Basin states support the Water and Power Resources Service (WPRS) appraisal study of saline water collection, pretreatment and potential industrial use.

The Colorado River Basin contains large energy resources which are in the early stages of development. The WPRS study should investigate the technical and financial feasibility of serving a significant portion of the water requirements of the energy industry and any other industries by the use of Basin brackish and/or saline waters. The Forum recommends that:

- I. The Colorado River Basin states, working with federal agencies, identify, locate and quantify such brackish and/or saline water sources.
- II. Information on the availability of these waters be made available to all potential users.
- III. Each state encourage and promote the use of such brackish and/or saline waters, except where it would not be environmentally sound or economically feasible, or would

significantly increase consumptive use of Colorado River System water in the state above that which would otherwise occur.

- IV. The WPRS, with the assistance of the states, encourages and promotes the use of brackish return flows from federal irrigation projects in lieu of fresh water sources, except where it would not be environmentally sound or economically feasible, or would significantly increase consumptive use of Colorado River System water.
- V. The WPRS considers a federal contribution to the costs of industrial use of brackish and/or saline water, where cost-effective, as a joint private-government salinity control measure. Such activities shall not delay the implementation of the salinity control projects identified in Title II of P.L. 93-320.

**POLICY FOR IMPLEMENTATION OF
COLORADO RIVER SALINITY STANDARDS
THROUGH THE NPDES PERMIT PROGRAM
FOR INTERCEPTED GROUND WATER**

Adopted by
The Colorado River Basin Salinity Control Forum

October 20, 1982

The States of the Colorado River Basin in 1977 agreed to the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program" with the objective for industrial discharge being "no-salt return" whenever practicable. That policy required the submittal of information by the applicant on alternatives, water rights, quantity, quality, and costs to eliminate or minimize the salt discharge. The information is for use by the NPDES permit-issuing agency in evaluating the practicability of achieving "no-salt" discharge.

There are mines and wells in the Basin which discharge intercepted ground waters. The factors involved in those situations differ somewhat from those encountered in other industrial discharges. Continued development will undoubtedly result in additional instances in which permit conditions must deal with intercepted ground water.

The discharge of intercepted ground water needs to be evaluated in a manner consistent with the overall objective of "no-salt return" whenever practical. The following provides more detailed guidance for those situations where ground waters are intercepted with resultant changes in ground-water flow regime.

- I. The "no-salt" discharge requirement may be waived at the option of the permitting authority in those cases where the discharged salt load reaching the main stem of the Colorado River is less than one ton per day or 350 tons per year whichever is less. Evaluation will be made on a case-by-case basis.
- II. Consideration should be given to the possibility that the ground water, if not intercepted, normally would reach the Colorado River System in a reasonable time frame. An industry desiring such consideration must provide detailed information including a description of the topography, geology, and hydrology. Such information must include direction and rate of ground-water flow; chemical quality and quantity of ground water; and the location, quality, and quantity of surface streams and springs that might be affected. If the information adequately demonstrates that the ground water to be intercepted normally would reach the river system in a reasonable time frame and would contain approximately the same or greater

¹The term "intercepted ground water" means all ground water encountered during mining or other industrial operations.

salt load than if intercepted, and if no significant localized problems would be created, then the permitting agency may waive the “no-salt” discharge requirement.

- III. In those situations where the discharge does not meet the criteria in I or II above, the applicant will be required to submit the following information for consideration:
 - A. Description of the topography, geology, and hydrology. Such information must include the location of the development, direction and rate of ground-water flow, chemical quality and quantity of ground water, and relevant data on surface streams and springs that are or might be affected. This information should be provided for the conditions with and without the project.
 - B. Alternative plans that could substantially reduce or eliminate salt discharge. Alternative plans must include:
 - 1. Description of water rights, including beneficial uses, diversions, and consumptive use quantities.
 - 2. Description of alternative water supplies, including provisions for water reuse, if any.
 - 3. Description of quantity and quality of proposed discharge.
 - 4. Description of how salts removed from discharges shall be disposed of to prevent their entering surface waters or ground-water aquifers.
 - 5. Technical feasibility of the alternatives.
 - 6. Total construction, operation, and maintenance costs; and costs in dollars per ton of salt removed from the discharge.
 - 7. Closure plans to ensure termination of any proposed discharge at the end of the economic life of the project.
 - 8. A statement as to the one alternative plan for reduction of salt discharge that the applicant recommends be adopted, including an evaluation of the technical, economic, and legal Practicability of achieving no discharge of salt.
 - 9. Such information as the permitting authority may deem necessary.
- IV. In determining whether a “no-salt” discharge is Practicable, the Permit-issuing authority shall consider, but not be limited to, the water rights and the technical, economic, and legal practicability of achieving no discharge of salt.

V. Where “no-salt” discharge is determined not to be Practicable the permitting authority shall, in determining permit conditions, consider:

- A. The impact of the total proposed salt discharge of each alternative on the lower main stem in terms of both tons per year and concentration.
- B. Costs per ton of salt removed from the discharge for each plan alternative.
- C. The compatibility of state water laws with each alternative.
- D. Capability of minimizing salinity discharge.
- E. The localized impact of the discharge.
- F. Minimization of salt discharges and the preservation of fresh water by using intercepted ground water for industrial processes, dust control, etc. whenever it is economically feasible and environmentally sound.

**POLICY FOR IMPLEMENTATION OF
COLORADO RIVER SALINITY STANDARDS
THROUGH THE NPDES PERMIT PROGRAM
FOR FISH HATCHERIES**

Adopted by
The Colorado River Basin Salinity Control Forum

October 28, 1988

The states of the Colorado River Basin in 1977 adopted the "Policy for Implementation of Colorado River Salinity Standards through the NPDES Permit Program." The objective was for "no-salt return" whenever practicable for industrial discharges and an incremental increase in salinity over the supply water for municipal discharges. The Forum addressed the issue of intercepted ground water under the 1977 policy, and adopted a specific policy dealing with that type of discharge.

A specific water use and associated discharge which has not been here-to-fore considered is discharges from fish hatcheries. This policy is limited exclusively to discharges from fish hatcheries within the Colorado River Basin. The discharges from fish hatcheries need to be addressed in a manner consistent with the 1977 and 1980 Forum policies.

The basic policy for discharges from fish hatcheries shall permit an incremental increase in salinity of 100 mg/l or less above the flow weighted average salinity of the intake supply water. The 100 mg/l incremental increase may be waived if the discharged salt load reaching the Colorado River system is less than one ton per day, or 350 tons per year, whichever is less. Evaluation is to be made on a case-by-case basis.

- I. The permitting authority may permit a discharge in excess of the 100 mg/l incremental increase at the time of issuance or reissuance of a NPDES discharge permit. Upon satisfactory demonstration by the permittee that it is not practicable to attain the 100 mg/l limit.
- II. Demonstration by the applicant must include information on the following factors relating to the potential discharge:
 - A. Description of the fish hatchery and facilities.
 - B. Description of the quantity and salinity of intake water sources.
 - C. Description of salt sources in the hatchery.
 - D. Description of water rights, including diversions and consumptive use quantities.

- E. Description of the discharge, covering location, receiving waters, quantity salt load, and salinity.
 - F. Alternative plans for minimizing salt discharge from the hatchery. Alternative plans should include:
 - 1. Description of alternative means of salt control.
 - 2. Cost of alternative plans in dollars per ton, of salt removed from discharge.
 - G. Such other information pertinent to demonstration of non-practicability as the permitting authority may deem necessary.
- III. In determining what permit conditions shall be required, the permit-issuing authority shall consider the following criteria including, but not limited to:
- A. The practicability of achieving the 100 mg/l incremental increase.
 - B. Where the 100 mg/l incremental increase is not determined to be practicable:
 - 1. The impact of the proposed salt input of each alternative on the lower main stem in terms of tons per year and concentration.
 - 2. Costs per ton of salt removed from discharge of each alternative plan.
 - 3. Capability of minimizing the salt discharge.
- IV. If, in the opinion of the permitting authority, the database for the hatchery is inadequate, the permit will contain the requirement that the discharger monitor the water supply and the discharge for salinity. Such monitoring program shall be completed within two years and the discharger shall then present the information as specified above.
- V. All new and reissued NPDES permits for all hatcheries shall require monitoring of the salinity of the intake water supply and the effluent at the time of peak fish population.
- A. Analysis for salinity may be either as total dissolved solids (TDS) or be electrical conductivity where a satisfactory correlation with TDS has been established. The correlation should be based on a minimum of five different samples.