

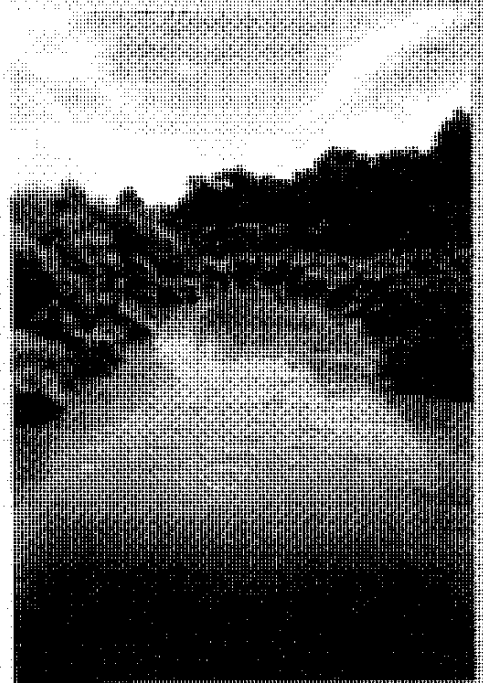
The New River Workshop

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IMPERIAL COUNTY WATER RESEARCH INSTITUTE

The New River Workshop

SPONSORED BY

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AND THE

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Barbara Worth Country Club
and Convention Center
2050 Country Club Drive
Holtville, CA 92250-9609

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FOREWORD

This report contains the results of a workshop which addressed the identification and prioritization of impediments to the clean-up of the New River. The workshop was organized by the National Water Research Institute in collaboration with the County of Imperial, California. Thirty participants from Mexico and the United States attended the workshop which was held at the Barbara Worth Country Club located in Holtville, California.

The priority issues presented in this report were originated by the participants in response to the workshop question *What are the most significant technical, economic and policy issues impeding improvements in water quality of the New River?* Each issue was written, presented, edited, and approved by the participant whose name is listed as the originator. The report is organized so that the 18 major issues are presented in descending order of importance as ranked by all 30 participants.

The report is organized into three sections. The first is an introductory section which describes how the workshop was conducted and provides a preliminary analysis of the results. The second part presents each of the eighty-three responses to the workshop question grouped under 18 major issue headings that appear in the table of contents. The third part of this report comprises appendices which contain a more detailed analysis of the ranking of research problems by the participants, including an analysis of two sub-groups of participants; Mexican and United States.

We want to acknowledge the insightful and substantial contributions made to this workshop by the participants themselves. The staff of the Barbara Worth Country Club which provided excellent accommodations and support. The workshop staff also deserves our thanks, including Cal Norman and Lourdes Campbell, simultaneous translators; Lucy Bravo, Maria Teresa Garcia and Suzanne Dahm, word processors; Joseph Pezely and Ted Flores graphics; Edrey Velasquez and Mario Meza, graphics assistants; Patricia Linsky, Dorothy Bjur and Veronica Delgado editors; Dr. Wesley Bjur, co-secretary (for Spanish); and Teresa Taylor, photographer.

Also, special thanks goes to the workshop organizing committee comprising Mr. Richard Kiy and Dr. Andrew L. Lissner of Science Applications International Corporation, Mr. Donald J. Martinson of NBS Lowry Corporation, and Messrs. Tony Wetherbee and Niall Lawlor of Chilton O'Connor, Inc.

We were gratified by the insightful and forthright presentations made by all of the participants. We were however surprised to hear several participants state that this meeting was the first occasion they had to discuss important issues with key individuals involved with the New River cleanup project. While the existing organizations concerned with this project have held hearings and meetings, it was apparent that the current institutional arrangements may not be adequate to ensure open dialog between the principals involved in this very complex issue. Also, it became clear as the workshop proceeded that representatives of several key agencies in the United States were not well informed of the issues still to be resolved.

Ronald B. Linsky
Executive Director
National Water Research Institute
Workshop Secretary

William S. Gaither, Ph.D., P.E.
Gaither & Associates
Workshop Chair

C O N T E N T S

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PARTICIPANTS



TOP ROW: (LEFT TO RIGHT) Tony Wetherbee, Niall Lawlor, Jim Setmire, Roy Schroeder, Terry Rees, Rich Inman, Andrew Lissner, Brad Luckey, Ishmael Williams, Maria Trejo, Dave Fege

STANDING: Ron Linsky (*Secretary*), Gabriel Navarro, Wayne Van De Graaff, Bill Kelly, Francisco Bernal, Bob Ybarra, Bob McCullough, Jose Sandoval, Gaston Loustaunau, Victor Hermosillo, Bart Christensen, Wes Bjur (*Asst. Secretary*)

SEATED: Lourdes Campbell (*Translator*), Ted Flores and Joe Pezely (*Graphics*), Phil Gruenberg, Antonio Rascon, Veronica Delgado (*Editor*), Charles Workman, Steve Allbee, Patricia Linsky (*Editor*), Sandy Archibald, Mario Luna

FLOOR: Mario Mesa (*Graphics Asst.*), Cal Norman (*Translator*), Edrey Velasquez (*Graphics Asst.*), Brian McNeece, Richard Kiy, Don Martinson, Maria Garcia (*Word Processor*), Bill Gaither (*Chair*), Dottie Bjur (*Editor*), Gary Krauss, Lucy Bravo (*Word Processor*), Suzanne Dahm (*Word Processor*)



Preparations

The National Water Research Institute (NWRI) was approached by officials of the County of Imperial in southern California in the winter of 1994 and asked to organize a program that would bring together a group of high level individuals from the United States and Mexico to identify and discuss critical issues connected with the clean-up of the New River which flows north out of Mexico, across the border, into the County of Imperial, and empties into the Salton Sea. The Salton Sea is the largest inland body of water in California; is approximately twice the salinity of the ocean; and, its surface is roughly 100 feet below sea level. The Sea has been used for recreation; however, due to increasing pollution, its attractiveness is declining.

Several recent events precipitated the need for the meeting, aside from the increase in pollution of the river due to increased population and lack of sewage treatment facilities in the City of Mexicali. First was the increasing need for assured sources of water for agriculture in the County of Imperial. Second was the motivation for bilateral cooperation between the United States and Mexico as a result of the two-year-old North Atlantic Free-Trade Agreement (NAFTA). As a result of the ratification of NAFTA, two new agencies were established: the Border Environmental Cooperative Commission (BECC) and the North American Development Bank (NADBANK). These new agencies augmented and reinforced the efforts of the hundred-year-old International Boundary and Water Commission (IBWC).

A workshop organizing committee was appointed to work with the Executive Director of the NWRI. This committee helped identify a list of invitees from Mexico and the United States. Invitation letters were mailed on April 12, 1995 (See Appendix G) to over 60 individuals at the local, county, state and federal levels in both countries. Thirty-four individuals accepted. On May 3rd these confirmed participants were sent workshop materials (See Appendix H), including a background paper attached to this report as Appendix B (Ref. 2).

Participants began to arrive on the afternoon of Friday evening, May 18, and following dinner that night, assembled in the workroom where the Executive Director of NWRI welcomed them and introduced the workshop chair. The Workshop Guidelines (Appendix I) and the Final Agenda (Appendix J) were reviewed and procedures were discussed. Following a question and answer period, participants were encouraged to return to their rooms to complete any unfinished homework.

Agenda

Breakfast was served at 6:00 a.m. the next morning, and the workshop began promptly at 8:00 a.m. Arq. Victor Hermosillo Celada, Srio de Asentamientos Humanos & Obras, Publicas del Edo of Mexico, and Mr. Wayne J. Van De Graaff,

County Board of Supervisors of the County of Imperial of the United States made brief welcoming remarks. Simultaneous translation was provided throughout the workshop. Thirty participants attended and were seated in alphabetical order. The organizing committee members were seated as observers.

The process followed was a modified version of the Nominal Group Technique (NGT) developed by Professors Delbecq and Van de Ven of the University of Wisconsin in the late 1960s (Ref. 1). The first day (Saturday) was divided into three phases:

- | | |
|------------------------|--|
| • 8:00 A.M.–12:00 NOON | Identification and Posting of Issues |
| • 12:00 NOON | Lunch |
| • 12:45 P.M.–6:00 P.M. | Consolidation of Issues into Major Issue Groups |
| • 6:00 P.M.–6:30 P.M. | Individual Participant Ranking of Major Issue Groups |
| • 6:30 P.M. | Adjournment for Day |

During the evening the workshop staff compiled the results of the rankings. The ten highest priority major issue groups were posted in descending order of importance as ranked by the entire group.

Issue Identification

Participants were seated in alphabetical order starting with Allbee in the front row right facing the lectern. The participant whose surname came latest in the alphabet (Ybarra) was seated in the last row left.

Each participant, in turn, was invited to the lectern to present his or her highest priority response to the workshop question which was posted on the front wall of the workroom in both English and Spanish. Three minutes were allowed for each presentation, timed by the chair. No figures or graphics were used by any participant though provision had been made for the use of graphics. Each speaker was responsible for providing camera-ready figures, if required.

At the conclusion of each presentation, the speaker was asked by the secretary to repeat the title. Since speakers could present their issue in either Spanish or English, two workshop secretaries were needed. Mr. Linsky was responsible for the English titles, and Dr. Bjur was responsible for Spanish titles.

If the title presented by the presenter represented clearly the ideas outlined in their oral presentation, the secretaries accepted it without comment. If, in the opinion of one or both of the secretaries, the problem title did not represent what the presenter had just said, a modified title was proposed by the workshop secretary in the language of the presenter. This title could be accepted or rejected by the presenter.

Questions of clarification to the presenter were allowed from the other participants. Neither challenges nor suggestions to modify the thrust of the oral presentation

were allowed by the chair. If a participant had in mind a variation on what a presenter proposed, the chair encouraged her or him to write that up as a problem and to present it as a discrete idea at their next turn.

At the conclusion of each three-minute (or less) presentation, the agreed upon title was lettered by both secretaries, one in English and one in Spanish, on a 3" card, numbered, the originator's name noted, and the card was taken to the two graphics persons working at the rear of the room. The title was then quickly lettered on a 35" by 22" sheet of paper, white for English and light green for Spanish, and posted neatly on the wall of the workroom. The lettering was of sufficient size that the most distant participant could read it with ease. By noon 83 issues had been presented and posted. This averaged over 2.8 issues per participant, a typical production for the NGT process.

The simultaneous translators were excellent. Each participant was equipped with a pocket-size, battery-powered, radio receiver and an airline-type, light-weight head set. Virtually no time was lost in the process of issue identification.

The Issue Identification Form (See Appendix K) on which the originator had prepared a detailed write-up was assigned a sequential number and delivered to the word processing room where it was typed, in the language it was written and in the format of this report. A draft was returned to the originator in the workroom for editing. Approximately twenty percent of the issues were written and presented in Spanish. The rest were presented in English. All problems were edited at least once by the originators before the 6:30 p.m. adjournment time.

Consolidation

After all issues were posted on the workroom wall in both Spanish and English, the process of consolidation was started. The goal was to group all of the issues presented into major issue groups so that when the priority ranking phase was reached at the end of the session, participants would not be confronted with major issues presented in duplicate or triplicate which might confuse the ranking process. Rather, the goal was to ensure that each issue would be put into a distinctive cluster of related ideas grouped under one overarching issue title.

Obviously, there were many ways in which a set of 83 issues could be grouped. The goal, as explained by the chair, was to strike a balance between subsuming too many titles under one heading and "burying" important ideas, and keeping each idea as a discrete title at the risk of confusing the participants with too many similar options to vote for. Usually, the consolidation phase goal is to reduce the total number of ideas remaining on the workroom wall to 25 to 30 percent of the total number proposed. In the case of this workshop, 83 ideas were merged into 18 discrete major issue groups with six of the 18 standing alone as unique issues. These issues were "boiled down" to 22 percent of the original number.

This is the stage of the NGT process when considerable debate and discussion takes place. To facilitate the process, each participant who originated a problem was asked to maintain a Consolidation Worksheet (See Appendix L) throughout

the problem identification phase. When a similar problem was presented, the originator was responsible for noting its number on the worksheet. The chair alerted each originator at the start of the workshop that they would be called upon in the consolidation phase to lead the discussion of how they would propose to cluster their issue with other issues into distinct major issue groups.

Each problem originator was assured by the chair that they would retain the absolute right to either merge their issue into a group of similar issues, or to insist that their issue stand alone. Similarly, each originator was assured that they retained the absolute right to title their issue in the way they thought to be most accurate and to edit their text the same way.

Whenever issues were subsumed under a major group title, the texts of all issues included under that overarching issue title were included in their entirety in this final report.

Ranking

The final step in the process was to ask each participant to rank the top ten issues and major issue groups remaining on the workroom wall in descending order of priority as they saw them being responsive to the workshop question. A sample copy of the Ranking Sheet used is included as Appendix M. The results of these individual ranking sheets established an order of importance of the 18 issue titles left on the workroom wall following the consolidation step. That order is the order in which the body of this report is organized.

Attribution of Individual Issues

Before the beginning of the issue identification process several participants who were members of governmental entities asked whether their issues were to reflect their personal professional views or the official position of their parent agency. The workshop chair asked that their issues reflect their best professional opinion that responded to the workshop question, not the official position of their parent organization.

Several participants asked that the following disclaimer be included in this report. The opinions expressed at the workshop and recorded in this document reflect the best professional judgements of the individual participants. As such, these views may not always precisely reflect the official position of their respective organizations.

Text Approval

As noted earlier, as soon as prepared text was entered into the word processors, a draft was returned to the originator for further editing. Some originators made continued improvements and required several drafts before they were satisfied. With each participant's approval in hand at adjournment time, it was possible to begin immediately to prepare this report.

PRELIMINARY ANALYSIS OF RESULTS

The results of this workshop were analyzed to determine what differences in priorities existed among two sub-groups of participants. This was done by taking the data from the Ranking Sheets (Appendix K) and compiling with members of the same group. The subgroups were divided into (1) Mexican participants and (2) United States participants. No category could contain only one individual or the confidentiality of the ranking process would be compromised. Fortunately, the smaller group in this workshop contained six individuals and the larger group contained 24.

Listed below are tables which give titles of the top ten priorities as established by the two subgroups listed above. The first table gives the ranking of all thirty participants and is in the same order as the table of contents. Subsequent tables represent the priorities of the two subgroups.

In Appendices D, E, and F complete rankings are given for each group. In those appendices three other items of information are given, including (1) the number of times picked, (2) the total points received, and (3) the strength of feeling expressed as a percentage. A more complete explanation of these data, and how they are computed, is given in Appendix A of this report.

The United States/Mexican participant ratio was four to one (i.e., 24 to 6), and therefore the rankings in this report were clearly influenced by the imbalance of the ratio. However, the differences in priorities between participants from the two countries can be seen in the second and third priority ranking tables given below.

The most dramatic difference in priorities is in the Mexican participants' second-ranked issue, "*The American Section of Responses to the Mexican Presentation at the CILA-IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination,*" which was the United States participants' fourteenth-ranked issue.

Top Ten Issues Ranked by All Participants (30)

1. How to Finance Water Quality Infrastructure
2. Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality
3. The Parties Have Not Agreed on a Facilities Plan
4. Need for Information on Future Value of Clean Water in This Area
5. Establish a Bi-national Framework to Document Past, Present, and Future Environmental and Human Health-related Conditions, Including Source Contaminant Characterization, Industrial Treatment, etc.
6. Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects
7. Very Little Concern on the Part of the Public Regarding the Solutions of the New River

8. International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs
 9. The Lack of a Lead Local/International Agency with a Stake in the Clean-up of the New River
 10. The American Section of Responses to the Mexican Presentation at the IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination
-

Top Ten Issues Ranked by United States Participants (24)

1. How to Finance Water Quality Infrastructure
 2. Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality
 3. The Parties Have not Agreed on a Facilities Plan
 4. Need for Information on Future Value of Clean Water in This Area
 5. Establish a Bi-national Framework to Document Past, Present, and Future Environmental and Human Health-related Conditions, Including Source Contaminant Characterization, Industrial Treatment, etc.
 6. Very Little Concern on the Part of the Public Regarding the Solutions of the New River
 7. The Lack of a Lead Local/International Agency with a Stake in the Clean-up of the New River
 8. International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs
 9. Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects
 10. The Need for Cooperation of Those Persons Using and Associated with the New River
-

Top Ten Issues Ranked by Mexican Participants (6)

1. How to Finance Water Quality Infrastructure
2. The American Section of Responses to the Mexican Presentation at the IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination
3. Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects
4. Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality
5. The Parties Have Not Agreed on a Facilities Plan
6. International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs
7. Very Little Concern on the Part of the Public Regarding the Solutions of the New River
8. There is a Lack of Intent and of Clarity in the Solution of the Problem
9. Need for Information on Future Value of Clean Water in This Area
10. Using the New River as a Case Study, Examine how Institutional Constraints Presently Affect the Solution of Transboundary Resource Problems

P R I O R I T Y R A N K I N G O F I S S U E S

Notes:

1. The following 18 issues are presented in descending order of importance as ranked by all (30) participants.
2. Priority issues often comprise several issues proposed by individual participants. Wherever that occurs, one lead participant is designated by the chair to composed not only a new title, but also a new statement of importance, objectives, and/or approach. The individual issues subsumed under the new title are presented alphabetically by author name.





How to finance water quality infrastructure

ORIGINATORS:

Rees on behalf of himself, Allbee, Fege, Gruenberg, Inman, Kelly, Loustau, Rascon, Trejo, and Wetherbee

Importance:

- Lack of economic resources to properly maintain existing sewage collection and treatment systems.
- Lack of capital to design and construct new sewage collection and treatment infrastructure.
- Traditional financial options, such as world bank loans, are too expensive for the water users to repay.

Objective:

Provide a stable, creative, finance structure that would permit the rapid construction of needed facilities and provide for the operation and maintenance of the facilities in the future.

Suggested Approach:

- Attempt to overcome private sector resistance to participate in program funding by soliciting their input early in the process.
- Combine public financing of loans and grants with private investment (possibly from maquiladoras) to meet life cycle costs.
- Establish a New River Trust Fund to augment funding for water quality improvements.
- Coordinate infrastructure operation and maintenance through the Comision Estatal de Servicios Publicos de Mexicali (CESPM) and the Imperial Irrigation District (IID).

The following issues were subsumed under the above summary priority issue:

ISSUE: **Establish a New River trust fund, to fund water quality improvement.**

ORIGINATOR: Allbee

Importance:

Decisions about what should be done, which items are priorities, and who should take action are fundamentally impacted by the flow of funds. The idea is to create a locally-controlled, watershed-oriented financing structure that would attract additional resources from outside the immediate area.

Objective:

Establish local/area empowerment; build on the current memorandum of understanding.

Suggested Approach:

- Identify a comprehensive set of local stakeholders.
- Identify common objectives.
- Establish a basis for contributing a user fee, special assessment, dedicated tax, sales tax, etc. The mechanism does not necessarily have to be uniform across the jurisdictions.
- Adopt a set of guidelines governing the use of the fund and a process for participation in the priority-setting process.
- Notify outside interests as to the existence of the trust account and seek contributions from federal/state governments, foundations, etc.

ISSUE: **On any given project, willingness to pay may not be aligned with ability to pay or affordability.**

ORIGINATOR: Allbee

Importance:

Cross-subsidy schemes may be required to generate enough operating resources to support the most desired capital investment.

Objective:

Make the best life-cycle, economic decisions to achieve the desired long-term result.

Suggested Approach:

Make the capital and operating subsidies interchangeable.

ISSUE: **Be prepared to combine public financing (grants and loans) and private investments including support from the maquiladora industry in creative ways to generate needed revenues.**

ORIGINATOR: Allbee

Importance:

It will take a multitude of sources to do the job (i.e., ensure that these funds can work together). Most of the funding that Congress is likely to appropriate is through loans, and the limited grants must be used in a manner that leverages their value.

Objective:

Ensure that sufficient alternate sources of funds are made available and able to work together.

Suggested Approach:

Work through the BECC/NADBANK approach.

ISSUE: **Lack of capital to design and construct a treatment plant in Mexicali.**

ORIGINATOR: Fege

Importance:

The most important action we can take to improve the water quality is to construct a treatment plant that can adequately treat Mexicali sewage. However, the plant cannot be constructed without sufficient funding.

Objective:

Search for adequate sources of capital from private or public sectors to construct a wastewater treatment plant in Mexicali, including BECC/NADBANK.

Suggested Approach:

All financing options should be considered. We should not rely on the federal governments to fund the plant; state funding grants or loans should be pursued as should BECC/NADBANK financing. Options of a concessionaire having the right to operate the plant should also be considered. Obviously, this needs to be a bi-national approach, agreed to by all stakeholders.

ISSUE: **Economic crisis in Mexico is limiting action.**

ORIGINATOR: Gruenberg

Importance:

It is estimated that resolution of the New River pollution problem in Mexico will cost upward of \$100M.

Objective:

Determine the cost of satisfactorily resolving the problem and seek financing.

Suggested Approach:

Implement a bi-national agreement addressing financing. Coordinate action with BECC.

ISSUE: **Attract private capital!**

ORIGINATOR: Inman

Importance:

Discussions of recreational, tourist and environmental benefits of a clean New River could attract capital from both sides of the border.

Objective:

Create a vision of potential.

Suggested Approach:

- Emphasize the potential benefits through renderings, models, and other presentation materials that illustrate parks, wetlands, and residential/commercial development.
- Market the benefits.

ISSUE: **The water users in the affected communities cannot afford to pay the full cost of clean-up through user fees.**

ORIGINATOR: Kelly

Importance:

This lack of funds causes dependence on federal and multilateral institutions that are in some disarray as a result of budget crises and overlapping mandates.

Objective:

To assure that all users pay to the extent of their abilities and then to work around the remaining funding shortfall by obtaining external financial support.

Suggested Approach:

Seek private capital, including user fee commitments, from (1) industrial users and (2) water sale proceeds for a portion of the financing. Use this “innovative” structure to seek more grants and concessionary loan funds; emphasize cost-effective technology.

ISSUE: **World Bank loans are too expensive in Mexico.**

ORIGINATOR: Kelly

Importance:

The World Bank is a major possible source of funding, and the bank has made a commitment of more than \$300 million to environmental projects in the border area. Banobras marks up the interest rate to unaffordable levels.

Objective:

Make maximum use of user fees and other revenues and thus enable the project to raise more capital by reducing the interest rate on the debt.

Suggested Approach:

As part of a comprehensive financing plan involving U.S. grant funding, seek more favorable terms from Mexico on World Bank loans.

ISSUE: **The private sector may not be willing to finance government-designed solutions because they may not be profitable.**

ORIGINATOR: Kelly

Importance:

There is a consensus that private capital will be required, but the private sector has been only minimally involved in the planning process.

Objective:

To make best possible use of user fees and any revenues that can be generated from water sales.

Suggested Approach:

Involve the private sector in the facility planning process, including the selection of location and technology.

ISSUE: **Lack of sufficient resources to carry out the clean-up work on the sewer system Mexicali II.**

ORIGINATOR: Loustaunau

Importance:

There are existing project designs for work to be done on the sanitary wastewater system Mexicali II. However, they cannot be carried out, or they are being realized in several stages, delaying thus the solution to clean-up problems of the New River.

Objective:

Resolve the problems of contamination of the New River produced by the discharge of raw sewage from the wastewater system called Mexicali II.

Suggested Approach:

Firm up the Bi-National Clean-up Plan in order to obtain the economic resources sufficient to permit the execution of the sewer works needed by the sanitary wastewater system Mexicali II.

ISSUE: Limited financial resources and debt capacity of the inhabitants to carry out the work immediately.

ORIGINATOR: Rascon

Importance:

The work projects required to resolve the problem have already been approved in the agreement of Act 288 of CILA, and these move ahead as funds become available. The residents however do not possess resources with which to construct work needed immediately, nor do they have the capacity to take on that level of indebtedness.

Objective:

Carry out the work approved in Act 288.

Suggested Approach:

Carry out the work in Mexico according to available resources and applicable norms in Mexico. If the U.S. wants this work to be constructed to different standards, let them provide the funds for the charges.

ISSUE: How to finance water quality infrastructure.

ORIGINATOR: Rees

Importance:

- Work plan is in place (Minute 288).
- Finance major impediments to implementation.

Objective:

Implement Minute 288.

Suggested Approach:

Explore innovative finance options rather than sole reliance on the Mexican and U.S. governments.

ISSUE: **Identification of creative future financing for implementation and sustainability of the New River project in tight budget times.**

ORIGINATOR: Trejo

Importance:

To augment (in the long term) current congressional earmarks for a New River treatment facility by identifying private or public resources for actual implementation and sustainability of project.

Objective:

Seek out public and private resources that can assist in identifying creative financing.

Suggested Approach:

Seek out sources, such as the BECC, that can assist in identifying other sources of funding.

ISSUE: **Understand how the New River financial issues are similar to all municipal financial issues.**

ORIGINATOR: Wetherbee

Importance:

- Do not complicate the issues. Simple problems can be solved with practical solutions.
- Complex problems are rarely solved with perfect solutions.

Objective:

- Select a workable financial alternative.

Suggested Approach:

- Brainstorm Financial Resources.
- Work into a legal format.
- Structure into a workable financial format.
- Determine an appropriate financial market.
- Create a market demand through a well thought out structure.

Take advantage of the historic coming together of positive developments to move the project from idea to reality.

ORIGINATORS:

Kelly on behalf of himself, Allbee, Bernal, Hermosillo, Luckey, Rascon, Setmire, Trejo, Van De Graaff, Workman, and Ybarra

Importance:

The existence of IBWC Minute 288, the first U.S. appropriations, the Mexican Draft Facilities Plan, and the Advent of NADBANK/BECC (and their need to demonstrate their usefulness) collectively created the opportunity to make this a demonstration project and build a sustaining political base.

If this opportunity is missed, the clean-up may be put back a decade or more by competing projects, changed personnel, increased interest rates and other factors.

Objective:

Seize the moment.

Suggested Approach:

- Establish a consensus and tight schedule for:
 - agreement on a facilities plan;
 - obtaining BECC endorsement; and,
 - developing a financing plan, including use of U.S. EPA appropriation.
- Regularly brief all interested parties, including BECC, NADBANK, the World Bank and the IDB regarding the timetable and plans.
- Throughout, emphasize the special features that make this a special project, including:
 - local cooperation;
 - mixed public-private financing; and,
 - demonstration of the positive effects of NAFTA and the ability of BECC/NADBANK to assist in resolving the problem.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Demonstrate that the new institutions (BECC and NADBANK) can contribute to solving the problem.**

ORIGINATOR: Allbee

Importance:

The set of relationships that are needed are similar in many of the sister cities. Much of the locally-based, cross-border dialogue that is essential to making these new mechanisms work is already present in the New River area. The bottom-up-type partnership arrangements have a good chance of success.

Objective:

To get projects built as soon as possible.

Suggested Approach:

- Continue the comprehensive facilities planning effort.
 - Subject the facilities plan to a BECC/NADBANK-type process.
-

ISSUE: **What does it take to be viewed as a problem of national importance: political power, rationale for the national character of the problem, or empathy?**

ORIGINATOR: Allbee

Importance:

Some of the funds need to be derived from national sources. People need to understand that the local commitment is real and other locally available financing mechanisms will not work.

Objective:

Border area agenda/not single communities.

Suggested Approach:

- Improve communications with congressional interest.
- Initiate public relations and outreach programs.

ISSUE: **Analyze and determine why there is no access to financing for the execution of work, or to apply technologies for their use.**

ORIGINATOR: Bernal

Importance:

Many of the participants have said that the problem is not technical, nor is it to carry on more projects. The problems and the manners of solution are already known. The problem is in how to pay the costs. What beneficial activities could pay the recovery costs, such as agriculture or industry.

Objective:

- Analyze cost/benefit relationships to determine the feasibility of recycling water.
- Since the region has adequate water supplies, it has to be determined which treatment process should be applied to compete with other existing sources.

Suggested Approach:

- Users who do not have rights to available good water in the region might think in the future of using this source, but until they arrive at this, there will be demand for short-term solutions.
- Another way is the realization of community development projects, taking advantage of these waters. However, it is necessary to find the optimal ways to get approved for said projects.

ISSUE: **Make use of the monies that the EPA already has assigned for fiscal 1995.**

ORIGINATOR: Hermosillo

Importance:

This opportunity should not be lost.

Objective:

Use the money in economic emergency projects that improve the system.

Suggested Approach:

The American party must respond to an investment plan which the Mexican party presented in March, 1995. Part of the project could be financed with this money and a complete agreement could be reached regarding investments between the United States and Mexico.

ISSUE: **We must seize the moment!**

ORIGINATOR: Hermosillo

Importance:

Mexico has the will to resolve the problem. The U.S. presented their proposal, and the state administration wants to participate, but its term of office terminates in November, 1995, after which it is possible to lose this opportunity. In addition, the federal administration begins, and we must not lose the opportunity to arrive at a compromise.

Objective:

We must formalize an action program based on the Mexican proposal integrated with the Bi-national Commission in March, in order to comply with the recommendations of Act 288.

Suggested Approach:

That as early as possible, the American section respond to the Mexican proposal.

ISSUE: **A protracted process will lose an historic opportunity.**

ORIGINATOR: Kelly

Importance:

Very tight budget situations in both countries will make funds difficult to obtain.

Objective:

- Move quickly enough to maintain momentum in Congress.
- Make New River clean-up a lead project for BECC and NADBANK (which may not get further funding from the federal government)

Suggested Approach:

- Agree on water quality standards.
- Promptly agree on at least a partial facility plan.

ISSUE: **Lack of political commitment to clean up the New River.**

ORIGINATOR: Luckey

Importance:

Without political support on both sides of the border, nothing will happen. The technical and economic roadblocks will disappear when elected officials decide to clean up the New River.

Objective:

Create a ground swell of political support to insure that clean up projects will be undertaken.

Suggested Approach:

Recent negative publicity has done nothing to help clean up the New River. We need to switch directions and market the positive aspects of the Imperial/Mexicali Valley. Possibly, we should combine clean up of the New River with current efforts of the Salton Sea Authority to clean up the Salton Sea.

ISSUE: **Advance the development of work already approved
by the IBWC.**

ORIGINATOR: Rascon

Importance:

The means necessary for the long-term solution of clean-up problems of the New River are already approved in Act 288 of CILA, so that what is required is to carry out the approved actions.

Objective:

Clean up the New River to benefit the inhabitants of both sides of the international border.

Suggested Approach:

Carry out the approved work. If the United States wants Mexico to carry out actions or objectives different from those approved in Act 288, these desires should be presented and agreed upon in the core meetings of CILA.

ISSUE: **Political pressure to accomplish clean-up of the New River.**

ORIGINATOR: Setmire

Importance:

Political pressure is the only way to obtain sufficient funding to accomplish clean-up of the New River.

Objective:

Keep New River Pollution in the news.

Suggested Approach:

- Hire a public relations firm to keep the New River pollution in the news and to put pressure on local congressional leaders.
- Make and distribute a short video that clearly shows the contamination.

ISSUE: **Local communities (working with local governments if necessary) to coordinate, organize, and develop projects for submission to the BECC for review.**

ORIGINATOR: Trejo

Importance:

Explore and access existing resources.

Objective:

Obtain certification from the BECC for NADBANK funding or other BECC resource.

Suggested Approach:

Work with BECC technical support staff to submit a timely project.

ISSUE: **“When all is said and done, there is more said than done.”**

ORIGINATOR: Van De Graaff

Importance:

Much has been said about the lack of activity in solving the New River problem. Mexico is doing the work; we are doing the talking.

Objective:

To make it clearly understood that we appreciate the progress Mexico has made.

Suggested Approach:

Give public recognition to Mexican officials.

ISSUE: **How shall both Mexico and U.S. Governments finance the large monies required to improve water quality?**

ORIGINATOR: Workman

Importance:

Neither state, local, or federal governments appear to be in a good fiscal position to accomplish the task.

The economic issue will undermine the political will to do what is right, if allowed.

Power interests will prevail, i.e., no action.

Objective:

Provide an annual budget to implement a plan, such as Minute 288. However, there should also be a U.S. “conceptual” plan that improves water quality all the way to the Salton Sea.

Suggested Approach:

Use environmental economics “101.” I suggest a “Republican” approach. Let the user/abuser pay. Tax water, if publicly provided, or effluent or discharge, if based on water rights. This will then support national borrowing or local bonds, or assist a long term tax on industry. Shift to the Fed’s only what can’t be levied. Subsidize marginal economic ventures for short durations only out of economic welfare necessity.

ISSUE: **Need to reconfigure government to bring action or change.**

ORIGINATOR: Workman

Importance:

- Some agencies regulate and have funding but cannot get locals to the point of use.
- Re-name and change missions; grants need expertise.

Objective:

To bring expertise to the local/state level.

Suggested Approach:

Empower the federal government to provide what is needed. Government can be made proactive if given authority.

ISSUE: **Give priority to identification of financing to implement the international solution in IBWC Minute 288.**

ORIGINATOR: Ybarra

Importance:

The U.S. and Mexico have defined international policy in international agreements in a conceptual plan. Technical applications are a subset as well as local implementation. The U.S. projects and Mexico cannot do it alone; bottom up support is needed. Traditional IBWC (federal grant supported) is passé in today's economic environment. The U.S./Mexico border infrastructure financing policy is changing.

Objective:

Define financing subsets – local, national and international.

Suggested Approach:

Build on existing international accords utilizing local/state/federal partnerships in support of emerging U.S./Mexico policy.

ISSUE: **Immediately undertake New River Project implementing BECC-like process.**

ORIGINATOR: Ybarrá

Importance:

- BECC/NADBANK created a new paradigm on wastewater financing.
- These institutions are not tested, but needs are defined and actions must take place using available grant money.
- The BECC project development process needs to be advanced.
- A financing package acceptable to NADBANK, etc. is needed to start such a prototype package.
- Local involvement is part of the BECC process and must be advanced.
- Local-to-local cross boundary coordination is an important component. One must look at future as those in these components are the ones that will pay the bill and support the project.

Objective:

Carry out the BECC/NADBANK-like actions immediately.

Suggested Approach:

- Use IBWC/EPA grant monies to accelerate:
 - projects needed immediately; and,
 - facilities planning to bring the projects to the BECC/NADBANK certification stage.
- Include a prototype finance package for the New River in the above.
- Include community involvement in this process.
- Seek changes in government policies to bring actions and changes necessary to improve the New River water quality.

ISSUE: **Immediate BECC/NADBANK-like implementation**

ORIGINATOR: Ybarra

Importance:

The BECC is an emerging institute focused on community participation, finance-ability of projects, capacity building, i.e., filling those gaps not met in the traditional approaches. The international problem is long standing -- immediate fixes are needed. Secondly, facilities planning (IBWC) - focus on bringing up Baja plans toward BECC-like process using EPA grant money. Move close to financing --meeting certification criteria that would be satisfactory to financial institutes.

Objective:

- Advance immediate need work.
- Advance BECC-like process.

Suggested Approach:

Support IBWC facilities planning approach with highest priority to immediate needs.

ISSUE: **Define a prototype financing package.**

ORIGINATOR: Ybarra

Importance:

- User rate studies will arrive at part of capital and operations and maintenance (O & M) costs = shortfall.
- Industries face regulatory need to provide pre-treatment = potential private capital.
- Much infrastructure has been provided with existing local funds = include in financing bubble.
- Foundation funds are oriented at research and discussions = include in financing bubble.
- Construction funds from U.S. federal programs earmarked to New River = include in financing bubble.

- NADBANK and others require high degree of equity = use financing bubble approach.
- Facilities plan may take less time than some perceive = include project in financing bubble.
- Available funds are first earmarked for design but may be used for some construction. The IBWC is about to provide a response to Mexican proposals.

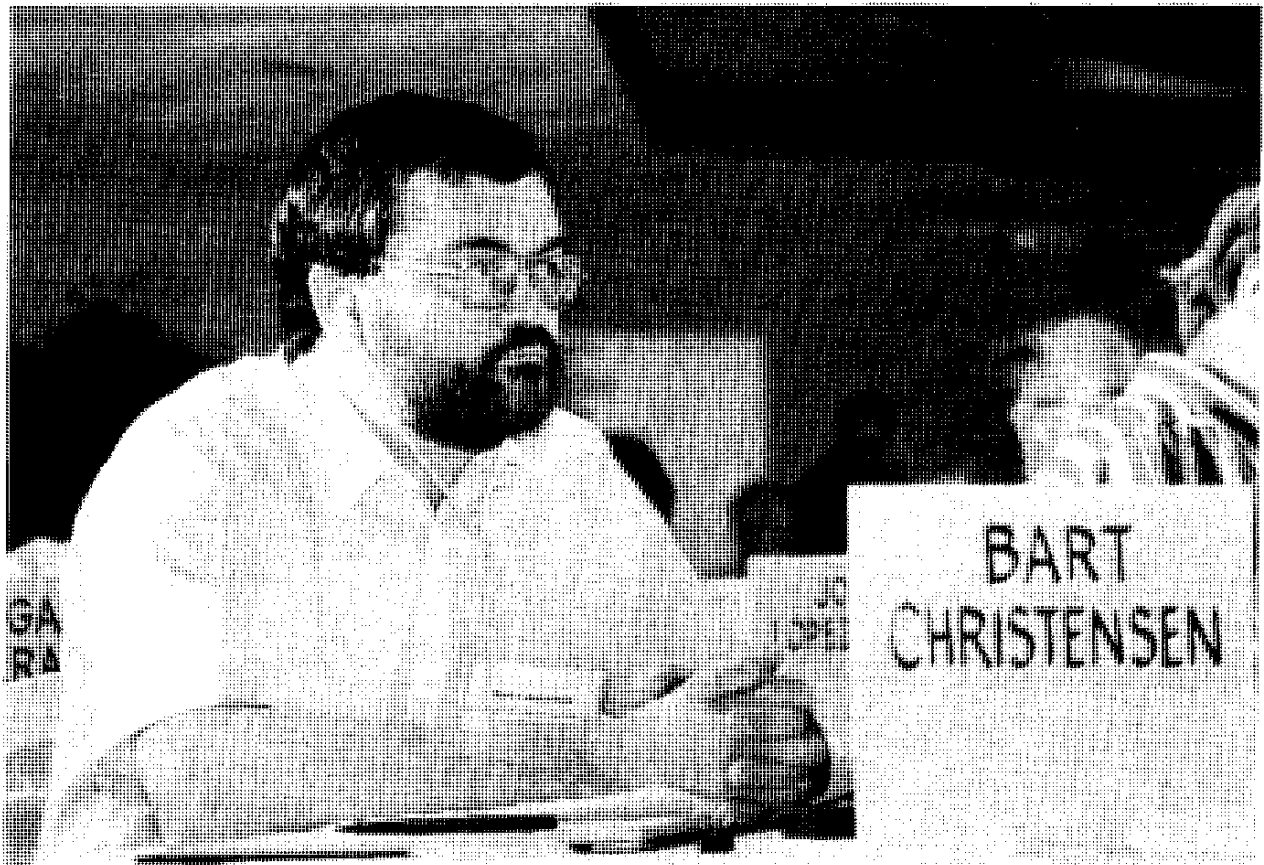
Objective:

Priority is to develop prototype financing in the facilities plan.

Suggested Approach:

Support such an approach in the facilities plan for the New River.





The parties have not agreed on a facilities plan.

ORIGINATORS:

Kelly on behalf of himself, Christensen, Gruenberg, Inman, Loustaunau, and Workman

Importance:

- We must live with the reality of limited financing and must therefore minimize cost while achieving acceptable abatement.
- Without a facilities plan, we cannot muster federal government and multilateral support for raising additional funds.

Objective:

- Develop a “Yesable Proposition” for the federal governments, multilaterals, lenders and others.
- Proposal must be cost effective and meet technical standards. Cognizant institutions must cooperate more actively to make certain that the facilities plan is technically and financially acceptable in both countries.
- Proposal must also begin resolving the problems of the existing Mexicali I operations, which is key to U.S. financial support of additional facilities in Mexico.

Suggested Approach:

- Consider using non-traditional technology and phasing construction to minimize capital and O & M costs.
- If appropriate, seek special regulatory relief to permit experiments and improve cost effectiveness.
- Use an engineering advisory committee for credibility to make all stakeholders comfortable with technology and cost determinations.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Solid waste dumping into the New River and tributary surface drains.**

ORIGINATOR: Christensen

Importance:

Inspections show that large quantities of solid waste are dumped along the banks of the New River and urban drains such as the Mexicali Drain. Some of this material is carried away by the river. Solid wastes can contain harmful materials, and the presence of solid waste creates a visual eyesore and a potential public health problem.

Objective:

Reduce amounts of solid waste entering the New River.

Suggested Approach:

Request Mexico's support to increase enforcement of anti-dumping ordinances and cover all open drains such as the Mexicali Drain, which flows into the New River.

ISSUE: **U.S./Mexico institutional problems.**

ORIGINATOR: Gruenberg

Importance:

- Multitude of governmental entities having an interest in addressing problems.
- Lack of coordination and communication may hinder progress.
- Involvement of opposing political parties at state and federal levels in Mexico.

Objective:

- Improve coordination and communication between involved parties.
- Suggested Approach:
- Recommend implementation of facilities planning approach.

ISSUE: **Technical difficulties in addressing New River pollution from Mexico.**

ORIGINATOR: Gruenberg

Importance:

Co-mingling of many different waste streams in the New River makes conventional treatment difficult at best. Separation of waste streams in Mexico is problematic because of the need to pump sewage upgradient. Major portions of sewage collection systems in Mexicali are poorly designed and dilapidated.

Objective:

Determine an optimal solution considering political and economic realities.

Suggested Approach:

Contract with a qualified engineering consultant to review the New River pollution problem and make recommendations.

ISSUE: **Focus on non-traditional technologies.**

ORIGINATOR: Inman

Importance:

Traditional approaches to wastewater treatment (i.e., big boxes) have proven to be extremely costly, difficult to operationally maintain, and ineffective.

Objective:

Expand focus to evaluate and explore non-traditional technologies.

Suggested Approach:

Convene an international scientific symposium to explore, discuss and determine effectiveness of alternative technologies.

ISSUE: **Pilot projects without risk of regulatory liability.**

ORIGINATOR: Inman

Importance:

Introduce legislation to allow for pilot environmental mitigation projects along the New River channel.

Objective:

Seek support for legislation to allow for development of projects enhancing environmental remedial measures without exposure to potential liability or regulatory enforcement.

Suggested Approach:

Investigate and identify potential projects that appear to have no apparent detrimental environmental impacts which are impeded by existing regulations/statutes.

ISSUE: **The parties have not agreed on a facilities plan.**

ORIGINATOR: Kelly

Importance:

Without an agreement on what is to be built, it is not possible to be effective in seeking outside financial support from federal and multilateral sources.

Objective:

Develop a "Yesable Proposition."

Suggested Approach:

Continue and conclude technical dialogues that are underway, leading to a consensus technical solution.

ISSUE: **There are numerous institutions and dependencies involved in the clean-up of the New River, on the part of both nations. It is worth the effort to simplify this situation.**

ORIGINATOR: Loustaunau

Importance:

The existence, in both nations, of many governmental and non- governmental institutions involved in the clean-up of the New River presents many administrative and official bureaucratic problems, slowing paperwork and delaying progress. "Bureaucracy" and "red tape" are easy answers.

Objective:

Improve processing procedures related to the completion of the clean-up work on the New River.

Suggested Approach:

Simplify and make more agile concrete functions and responsibilities on the part of both nations, with respect to the intervention of the entities involved in the diverse actions needed to execute the clean-up projects of the New River. We propose the formation of an Executive Working Committee to carry out the tasks necessitated by the Imperial Irrigation District and Comision Estatal de Servicios Publicos de Mexicali. The remaining agencies will provide technical and economic support, along with supervising specifications and the use of the monies.

ISSUE: **A need exists to jointly work engineering issues on a more continuous basis to address technical questions.**

ORIGINATOR: Workman

Importance:

- Continuous progress on both sides is difficult without conferring on a more regular basis.
- Allows better implementation and cooperation to tie in engineering and politics.

Objective:

Facilitate the engineering progress and implementation of the conceptual plans.

Suggested Approach:

Establish a standing engineering board for the New River that would be responsive to the boundary commission but charged to meet and refer problems, exchange data and technical expertise. Fund through existing federal government agencies.



Need for information on future value of clean water in this area.

ORIGINATORS:

Archibald on behalf of herself, Christensen, Martinson, and Setmire

Importance:

Water is not now a scarce resource in this area which limits people's willingness to pay for improvements. Water will likely be scarce in the future. Also, clean water could facilitate economic development with large benefits.

Objective:

Study/analyze future values including the economic, health, recreation and habitat values of a clean river.

Suggested Approach:

Rely on an analysis of stakeholders in the area who can identify present and future benefits to the region. Make this study the backbone of a public statement to serve as a basis for gaining support for water quality improvement.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Develop information about the costs and benefits of water quality improvements including who loses and who gains from clean water.**

ORIGINATOR: Archibald

Importance:

- Difficult to design policy solutions when there is uncertainty about costs and benefits of options.
- Often cannot begin a policy dialogue when costs and benefits are unclear.

Objective:

This might identify that the gains from improvements are high, but "gains" don't come to those who pay for them. The "gainers" might be willing to compensate or provide resources for clean-up if benefits are sufficiently high.

Suggested Approach:

Identify the expected gains and costs of clean water alternatives from those familiar with the issues.

ISSUE: **Lack of value for water in the New River.**

ORIGINATOR: Christensen

Importance:

If water in the New River has no value (economic or environmental) there is less incentive to spend money to clean it up. Domestic, industrial and agricultural wastewaters can be treated and used to create value. For example, treated wastewater could be purchased to irrigate lands that are not now farmed, or it could be purchased to create environmental habitats in the U.S. and/or Mexico. Interestingly, if water could be diverted from the New River in Mexico or the U.S., it could also result in reduced flood damage in the Salton Sea which would also create a valuable outcome.

Objective:

Treat waste discharges to the New River sufficiently to make them have a market value.

Suggested Approach:

Investigate the potential markets for treated water diverted from the New River and determine what quality of water is needed.

ISSUE: **Lack of coordination between pollution problems and water supply problems on a state-wide basis.**

ORIGINATOR: Martinson

Importance:

California's water supply will be short 4 million acre footage in the long range. The cost to bring water from north to south is \$600 – 1,000 per acre foot. Water reclaimed here creates a new source and should be valued on a state-wide basis.

Objective:

Create an incentive for water transfers.

Suggested Approach:

Obtain cooperation between water supply agencies to pay for water quality improvements in exchange for purchasing newly created water.

ISSUE: **Impact of New River water on beneficial uses in the Salton Sea.**

ORIGINATOR: Setmire

Importance:

The Salton Sea is the terminus of both the New River and the Alamo River. Roughly one-third of the flow discharging to the Salton Sea via the New River contains untreated or partially-treated municipal wastewater and industrial effluent. Water contact activities in the Salton Sea are adversely effected due to the real and/or perceived threat from possible water-borne pathogens.

Objective:

Increase water contact activities and overall use of the Salton Sea. Remove the real and/or perceived threat of human health hazards due to the discharge of untreated municipal wastes and industrial effluent to the New River.

Suggested Approach:

- Two main approaches would alleviate this problem. The first is to divert municipal wastes and industrial effluent away from the New River, either reclaiming and reusing this water source or sending it to evaporation ponds somewhere in Mexico. This approach has the added benefit of reducing salt input to the Salton Sea and possibly helping to stabilize the Sea's elevation.
- For the second approach, take two people from each side of the border who can put together the proposal with cost breakdown for Minute 288 and submit the proposal to the local congress members (who are not represented here). The congressional representatives can officially submit the proposal to the NADBANK and BECC.

ISSUE: **Beneficial uses of New River Water.**

ORIGINATOR: Setmire

Importance:

Few, if any current beneficial uses of the New River are possible due to its high level of pollution. More than 7,000 acres of river bottom land are available in the Rio Bend area and south of Interstate 8. This area could be converted to excellent wetland habitat using water from the New River.

Objective:

Using New River water to create wetland habitat in the river bottom areas of the New River.

Suggested Approach:

Direct water from the New River in the area south of Interstate 8, to create a flow through wetland within the 7,000 acres to treat the water and provide needed wetlands habitat. Obtain needed relief from regulations to accomplish this project.



Establish a bi-national framework to document past, present and future environmental and human health-related conditions, including source contaminant characterization, industrial pre-treatment, etc.

ORIGINATORS:

Lissner on behalf of himself, Christensen, Gruenberg, McNeece, Rees, Van De Graaff, and Williams

Importance:

- Source characterization is critical to proper study design/implementation.
- Documenting past and present conditions is needed to specify appropriate clean-up technologies (and associated financing).
- Knowledge of future conditions, including reduced source contamination via pre-treatment, is key to tracking recovery.

Objective:

- Document environmental and human health conditions.
- Document source contaminants, including improvements via pre-treatment.

Suggested Approach:

- Prepare a “state of the environment” report incorporating the voluminous existing data and following the approach checklist found within this priority ranking under Issue Title: The type, extent and severity of environmental contamination is not adequately documented.
- Design and conduct additional studies, only as needed, to fill key data gaps identified in the state of the environment report.
- Integrate results/conclusions of the report into engineering (and associated financing) decisions related to clean-up and infrastructure development.
- Design an appropriate monitoring program to document future conditions related to recovery after clean-up is implemented.
- Characterize source contaminants, particularly changes and improvements, after clean-up is implemented.
- Upgrade and implement industrial pre-treatment programs.



The following issues were subsumed under the above summary priority issue:

ISSUE: **Need for an effective industrial waste monitoring, inspection and pre-treatment program in Mexicali.**

ORIGINATOR: Christensen

Importance:

There are three reasons for industrial pre-treatment. The first two are environmental and public health protection. The only way to remove heavy metals and industrial toxics from the New River is to monitor all industrial discharges (not just maquiladores), inspect industrial operations and enforce compliance with standards. Many industrial wastes are not removed by conventional wastewater treatment systems. The other is to remove materials which would jeopardize operation of treatment processes in Mexicali. Some industrial wastes will harm biological treatment processes.

Objective:

Remove harmful industrial wastes from the New River.

Suggested Approach:

Implement a comprehensive industrial waste monitoring and pre-treatment program in Mexicali, similar to ones developed by San Diego and other California cities.

ISSUE: **Insufficient information on specific wastewater discharges in Mexicali.**

ORIGINATOR: Gruenberg

Importance:

There is a need to characterize wastewater in order to properly design and operate treatment facilities.

Objective:

Implement site specific monitoring in Mexicali including industrial wastewater characterization.

Suggested Approach:

We should seek Mexico's cooperation in implementing a wastewater characterization program.

ISSUE: **The type, extent and severity of environmental contamination is not adequately documented.**

ORIGINATOR: Lissner

Importance:

There is a need to ensure that appropriate technological and financial solutions are targeted, and an environmental baseline exists against which improvement can be measured.

Objective:

Summarize/specify the type, extent and severity of environmental contamination; prepare a “state of the environment” report for the New River.

Suggested Approach:

- Data and information needs:
- Availability of existing data.
 - Where archived and by whom?
 - What format (i.e., hard copy or computer medium)?
- Evaluate/verify data quality.
 - Comparable methods?
 - Adequate sampling locations?
 - Appropriate temporal collections?
 - Identify data gaps.
- Select data management system and location.
- Analyze and interpret existing data.
 - Results/conclusions.
 - Data gaps.
- Design and implement program to fill data gaps.

ISSUE: **Little history of cooperative data gatherings by pollution control agencies on both sides of the border.**

ORIGINATOR: McNeece

Importance:

While the river crosses international boundaries, it is one problem in one geographical formation, the Salton Sink. Solving one problem requires one team

Objective:

Create professional, on-going linkages between local enforcement personnel on both sides of the border.

Suggested Approach:

Look to the models provided by the history of cooperation among local law enforcement agencies on both sides of the border. Establish regular meetings and cooperative data gatherings and regular bilingual report writings by the relevant agencies in California and the city of Mexicali.

ISSUE: **Need to document recovery after implementation of Minute 288.**

ORIGINATOR: Rees

Importance/Objective:

Demonstrate to all interested parties that the investment has produced the desired results.

Suggested Approach:

Conduct a long-term monitoring study to document water quality improvements and biologic rebirth of the river.

ISSUE: **Health issues.**

ORIGINATOR: Van De Graaff

Importance:

Although there has been no known outbreak of any diseases from the river, there is a great potential for it to happen. It is not known if medical expertise exists to recognize such a problem in the Imperial/Mexicali Valley to call attention to what could be a serious situation.

Objective:

To be prepared for and aware of such a potential epidemic should it occur.

Suggested Approach:

Proper training of health officials on both sides of the border to recognize such diseases and the continued testing of water on both sides of the border.

ISSUE: **Apply Geographical Information Systems (GIS) technology to facilitate the assessment, modeling, and tracking of sources of water pollution.**

ORIGINATOR: Williams

Importance:

GIS is a powerful tool for manipulation of spatial environmental data, the incorporation of existing data from monitoring, and for modeling environmental processes such as point and non-point source pollution.

Objective:

Document the type, extent, and severity of environmental contamination in the New River and from that, design a plan for long-term modeling and mitigation tracking.

Suggested Approach:

- Work through the Transboundary Resource Inventory Project which involves

Lack of revenues among responsible agencies to support the staff needed to develop New River pollution abatement projects.

ORIGINATORS:

Christensen on behalf of himself, Luna, and Sandoval

Importance:

Existing wastewater infrastructure has inadequate capacity and reliability. The collection system and treatment plant performance suffer from a lack of maintenance. State and local officials in Baja California cite revenue shortages as the major cause of these problems. Unless revenues are increased, the New River will continue to be subject to pollution from collection system failures and poorly treated discharges from wastewater treatment plants. A New River clean-up effort will not have the desired result if there is no adequate maintenance work by the Mexicali Utilities Department.

Objective:

Achieve a wastewater system in the City of Mexicali with reliable and optimum operations and maintenance.

Suggested Approach:

Implement a wastewater user fee system for operations and maintenance costs and a connection fee system for capacity needs. Develop a comprehensive maintenance management system including an assessment of maintenance, equipment, and staffing needs. Use this evaluation to support maintenance budget requests. In addition, determine staffing needs required to identify necessary wastewater system improvements and to design, construct and operate them. Work with the Mexican government through CILA to obtain financial assistance.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Inadequate maintenance of existing Mexicali wastewater infrastructure.**

ORIGINATOR: Christensen

Importance:

Inspections show that New River water quality is impacted by poorly maintained wastewater infrastructure in Mexicali. Construction of infrastructure is a short-term solution to New River pollution if the infrastructure is not maintained.

Objective:

Develop an effective maintenance management program.

Suggested Approach:

As part of a facilities plan for Mexicali, hire wastewater system maintenance experts to review existing maintenance practices, identify maintenance needs and develop a comprehensive maintenance management program for Mexicali wastewater infrastructure. Use this evaluation to support necessary funding for operations and maintenance from local or other sources.

ISSUE: **Lack of revenues among responsible agencies to support the staff needed to develop New River pollution abatement projects.**

ORIGINATOR: Christensen

Importance:

There are many opportunities for improving New River quality; however, the involved agencies in the United States and Mexico do not have enough staff to develop or implement them, or even to manage contracts to private firms which could do the work.

Objective:

Ensure funding is adequate to provide needed staffing.

Suggested Approach:

Work with local politicians to obtain additional funds.

ISSUE: **There exists a backlog of several years in the planning of municipal sewer system services.**

ORIGINATOR: Luna

Importance:

Attacking the existing problem of planning a sewer system, it is possible to detect those points of the system that present problems of capacity, flow slope, and physical conditions of the installations.

Objective:

Define the priority actions to be taken to solve existing problems on the basis of actualized information about the principle components of the sewage system.

Suggested Approach:

Elaborate an in-depth study on the evaluation of the principle characteristics and the actual state of the existing sewage system. Identify, among other things, conductive capacity, materials and types of tubing, equipment, time in service and physical conditions of the installation, service areas, actual flows, etc.

ISSUE: **The lack of appropriate equipment for the planning, project elaboration, construction, operation and maintenance.**

ORIGINATOR: Sandoval

Importance:

The fact that the operating organism of the wastewater system of the municipality of Mexicali could count on having sufficient, appropriate equipment to carry on the work would permit improvement of efficiency and quality of service.

Objective:

To improve the quality of service of the wastewater system in the municipality of Mexicali, diminishing thus the risk of discharging raw sewerage into the New River.

Suggested Approach:

To revise the possible manners in which to obtain economic resources for the operating organism, in such a way that it makes possible the acquisition of sufficient equipment adequately functioning for more efficient and higher quality service levels



Very little concern on the part of the public regarding the solutions of the New River.

ORIGINATORS:

Bernal on behalf of himself, Christensen, Gruenberg, McCullough, and McNeece

Importance:

Pressure from social groups that are being affected by the contamination of the New River has not been sufficient to move the authorities to solve the problems, especially in regard to treatment and re-use of the water.

Objective:

- Determine the impact on the inhabitants and its effects on public health.
- Inform by means of a publicity program about the dangers that it represents.
- Involve industry and other contaminating sectors in these publicity programs.

Suggested Approach:

- Produce brochures, informative programs for the population as well as promote action toward the development of systems to reduce noxious effects.
- The development-oriented entities from both countries should present a plan for the beneficial uses by the population of the waters of the New River.

The following issues were subsumed under the above summary priority issue:

ISSUE: **There has been a lack of sufficient social pressure to force attention on resolving the problems.**

ORIGINATOR: Bernal

Importance:

There is no public complaint for resolution. There is no need to utilize these waters because as of yet there is no water crisis in Mexicali.

Objective:

Determine the real problem by sector, reuse cost and the bi-national consequences that may arise, derived from its use by each country.

Suggested Approach:

Perform a study to determine the feasibility of utilization not only in agricultural aspects but also in other aspects, such as urban, public, or industrial usages.

ISSUE: **Public involvement in development of the New River Pollution Abatement Projects.**

ORIGINATOR: Christensen

Importance:

Public involvement, in the United States and Mexico, is essential because public support is needed to support financing and construction of wastewater infrastructure.

Objective:

Increase public involvement and access to information so the public understands what the problems are and what the potential solutions are.

Suggested Approach:

Increase the number of public meetings and provide a wider distribution of planning documents regarding New River pollution abatement.

ISSUE: **Relative lack of public concern toward addressing problem.**

ORIGINATOR: Gruenberg

Importance:

Although public concern toward addressing the New River problem is on the upswing, it still seems considerably less than that associated with other border pollution problems, i.e., San Diego/Tijuana. Community support in Imperial Valley for addressing agricultural caused water quality problems is practically non-existent.

Objective:

Effectively funnel public concern through appropriate channels.

Suggested Approach:

Provide public education through informational forums, particularly at the local (county) level.

ISSUE: **Lack of participation/involvement by Mexicali industries/businesses.**

ORIGINATOR: McCullough

Importance:

A significant part of the border economy in Mexicali stems from the local industries and businesses. Having reasonable wastewater treatment should be important to those stakeholders, especially to sustain the labor force essential to their businesses.

Objective:

Develop partnerships/alliances with the businesses/industries in Mexicali.

Suggested Approach:

- Seek leadership of the largest and/or most community involved industries/businesses
- Find positive incentives to bring these stakeholders into the resolution process.

ISSUE: **There is no simple victim of the New River pollution, therefore emphasis should be placed on the potential of a clean New River.**

ORIGINATOR: McNeece

Importance:

There have been no outbreaks of disease attributed to the New River either in Mexico or in Imperial County, and therefore little social pressure exists for agencies to cooperate or funding to be made available.

Objective:

When we promote clean-up of the New River, we need to emphasize that a clean New River will be accompanied by many positive outcomes, including housing and recreational facilities along its length.

Suggested Approach:

- Tie clean-up efforts to an economic development plan of the New River basin.
- Create artist's renderings of potential development and use them to raise public interest in the county, in the region, and in Congress.
- Do these on both sides of the border.



International commitments made prior to obtaining public support or a thorough identification of the problems, solutions and costs.

ORIGINATORS:

Christensen on behalf of himself,
Gruenberg, Hermosillo, and Rees

Importance:

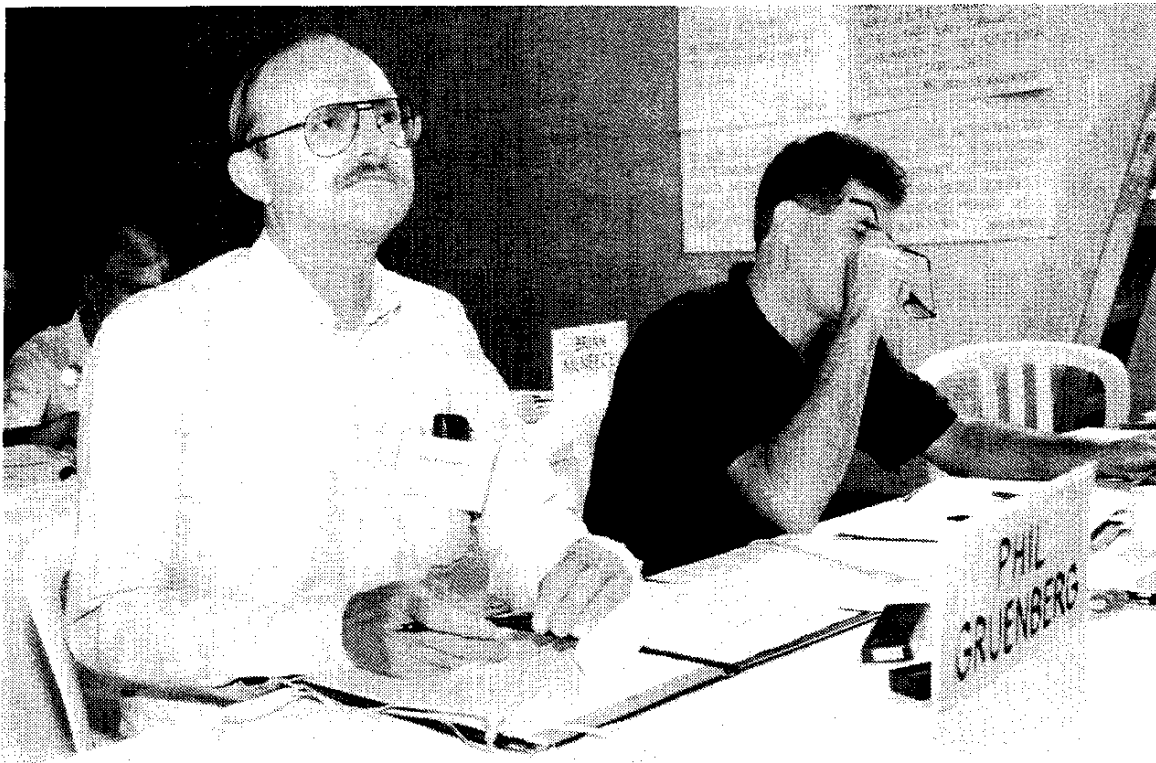
If bi-national commitments are made before all needed information is obtained, potential solutions are openly evaluated and public support is obtained, incorrect solutions may be selected and not supported politically or financially.

Objective:

Make an international commitment to conduct a thorough open, bi-national evaluation of New River problems, solutions and costs.

Suggested Approach:

Suggest that IBWC consider a supplemental Treaty Minute to expand on Minute 288.



The following issues were subsumed under the above summary priority issue:

ISSUE: **The IBWC Treaty Minute Process**

ORIGINATOR: Christensen

Importance:

The IBWC Conceptual Treaty Minutes commit both governments to specific wastewater system improvements prior to completion of a facilities plan which would include an alternatives analysis, environmental report and a revenue program. The result can be commitments to unaffordable, environmentally-unacceptable or inefficient projects.

Objective:

Ensure that conceptual Minutes are not signed until after a comprehensive facilities plan is completed.

Suggested Approach:

Make this recommendation to IBWC for consideration.

ISSUE: **Difficulty in addressing New River pollution because of involvement of sovereign nations (U.S. and Mexico).**

ORIGINATOR: Gruenberg

Importance:

Mexico lacks the resources to satisfactorily address the problem. The problem is impractical to fully address in the United States.

Objective:

Create a framework between the two nations to satisfactorily address the problem. Since Mexico lacks resources, the United States must be able to participate financially and technically in addressing the problem with Mexico.

Suggested Approach:

Implementation of binational agreements such as Treaty Minute 288 including appropriate state and local input.

ISSUE: **Combine forces and responsible authorities from both countries toward the joint resolution of the problem.**

ORIGINATOR: Hermosillo

Importance:

Separately, we have been unable to solve the problem in 60 years.

Objective:

To understand the problems and solutions proposed by both sides of the boundary in order to see how we can mutually solve the problem.

Suggested Approach:

That the responsible institutions form a working team and combine forces to resolve the problem.

ISSUE: **How to finance water quality infrastructure.**

ORIGINATOR: Rees

Importance:

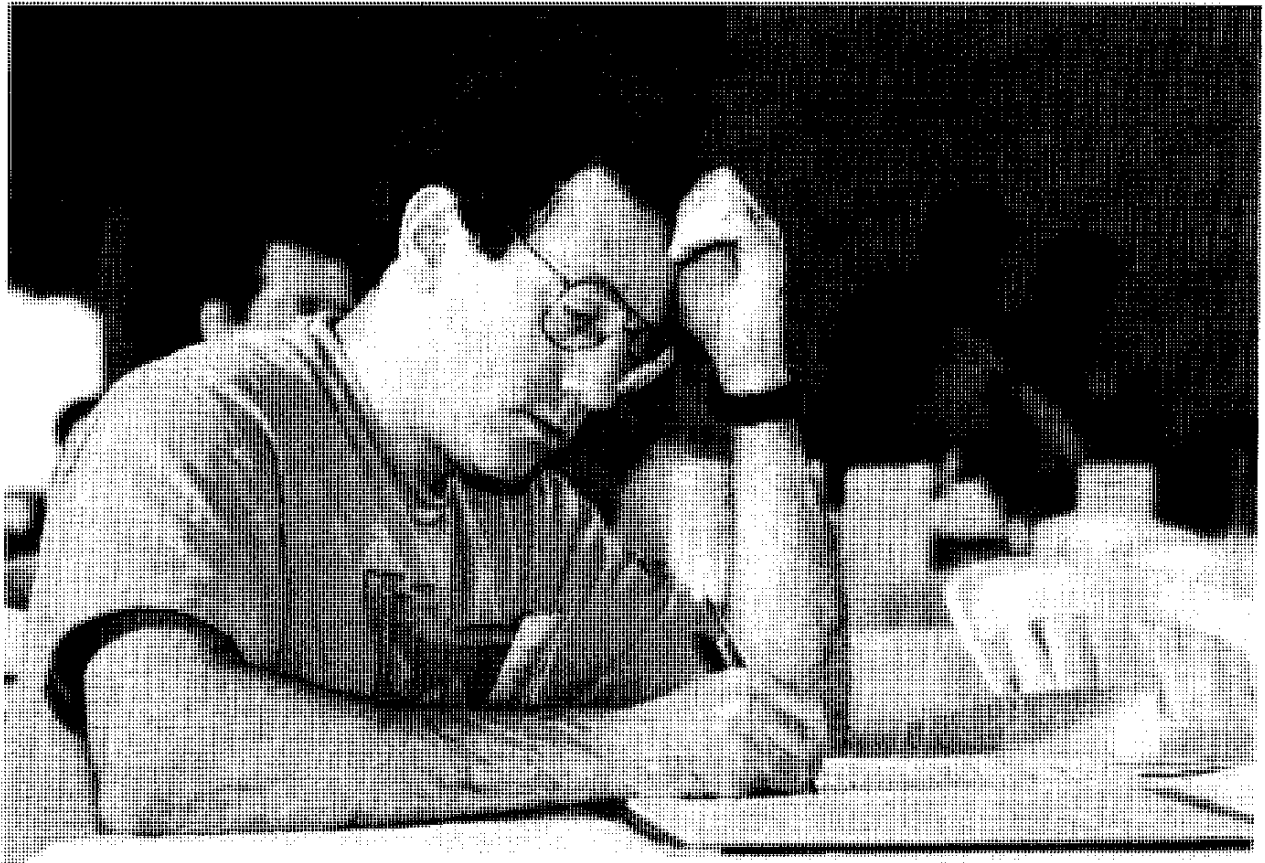
- Work plan is in place (Minute 288).
- Finance major impediments to implementation.

Objective:

Implement Minute 288.

Suggested Approach:

Explore innovative finance options rather than sole reliance on the Mexican and U.S. governments.



The lack of a lead local/international agency with a stake in the clean-up of the New River.

ORIGINATORS:

McNeece on behalf of himself, Bernal, and Krauss

Importance:

- Only a local agency will have a long-term stake in remedying local environmental problems.
- Only an agency with international jurisdiction can manage funding for an international problem.
- The IBWC/CILA as the only agency with international jurisdiction is not structured to cooperate with local institutions to remedy local problems or to finance environmental infrastructure projects through municipal financing mechanisms.
- Institutional barriers prevent federal agencies from effectively cooperating to plan, collect, share and disseminate information to local levels.
- The BECC and NADBANK have been formed to fund international projects under local control.

Objective:

Create an international institutional arrangement within already existing local institutions with special joint powers to petition funds, issue bonds, and coordinate construction, monitoring, and maintenance of clean-up projects.

Suggested Approach:

- Follow the models of joint powers authorities found within:
 - The Cascadia Corridor Commission
 - The proposed Air Quality Management District of El Paso and Ciudad Juarez.
 - The bond-issuing authority of the joint agency formed by New York and New Jersey.

The following issues were subsumed under the above summary priority issue:

ISSUE: **There exists a large number of institutions in both countries that are involved in analysis of the problem.**

ORIGINATOR: Bernal

Importance:

- There is a lack of coordination and decision to resolve the problem on the part of the action people of each dependency, at the different federal, state and local levels.
- It is necessary to combine forces of the institutions with citizen participation in order to solve the problem.

Objective:

Define the operative instance or entity who can fulfill technical and operative functions and also administer the resources, hydraulic as well as financial.

Suggested Approach:

In the suggested case, it is necessary to involve official organisms, non-governmental, private (industrial) users, and academics, with the purpose of determining the implementation of projects, in agreement with an analysis of need and factibility.

ISSUE: **Institutional barriers prevent federal agencies from effectively cooperating to plan, collect, share, and disseminate information with local and state levels.**

ORIGINATOR: Krauss

Importance:

Lack of access to information on both sides of the border has been an impediment to local and regional water planning efforts. Politics and federal agency missions often prevent them from being open, flexible and innovative. There is a need to coordinate the collection of social, economic and technical information.

Objective:

Identify how government agencies may be more effective in a bilateral situation.

Suggested Approach:

Assemble a bi-national committee study under the U.S. National Research Council and the newly formed Mexico National Research Council as a vehicle that could independently evaluate institutional and bi-national arrangements. The study would provide a bi-national framework within which new institutions and existing federal agencies could better facilitate water planning efforts at the local level.

ISSUE: **The lack of a local/international lead agency with a stake in the clean-up of the New River.**

ORIGINATOR: McNeece

Importance:

The IBWC/CILA is the only agency with international jurisdiction, but this agency is too distant in human terms from the affected constituents.

Objective:

The administration of any engineering project and maintenance operations related to cleaning up the New River should be a team controlled by the County of Imperial and the Ayuntamiento de Mexicali.

Suggested Approach:

Investigate models of precedents for locally-controlled international agencies.

ISSUE: **Need for U.S. and Mexico to authorize an agency with joint powers to administer the New River clean-up.**

ORIGINATOR: McNeece

Importance:

Turf battles between agencies and sovereignty issues between countries have created institutional paralysis. Only a local international entity with joint powers can effectively meet the requirements of managing the financing, engineering and operation of a clean-up plan. Recent changes in the policies of both federal governments provide an opportunity for local control that makes sense for the New River.

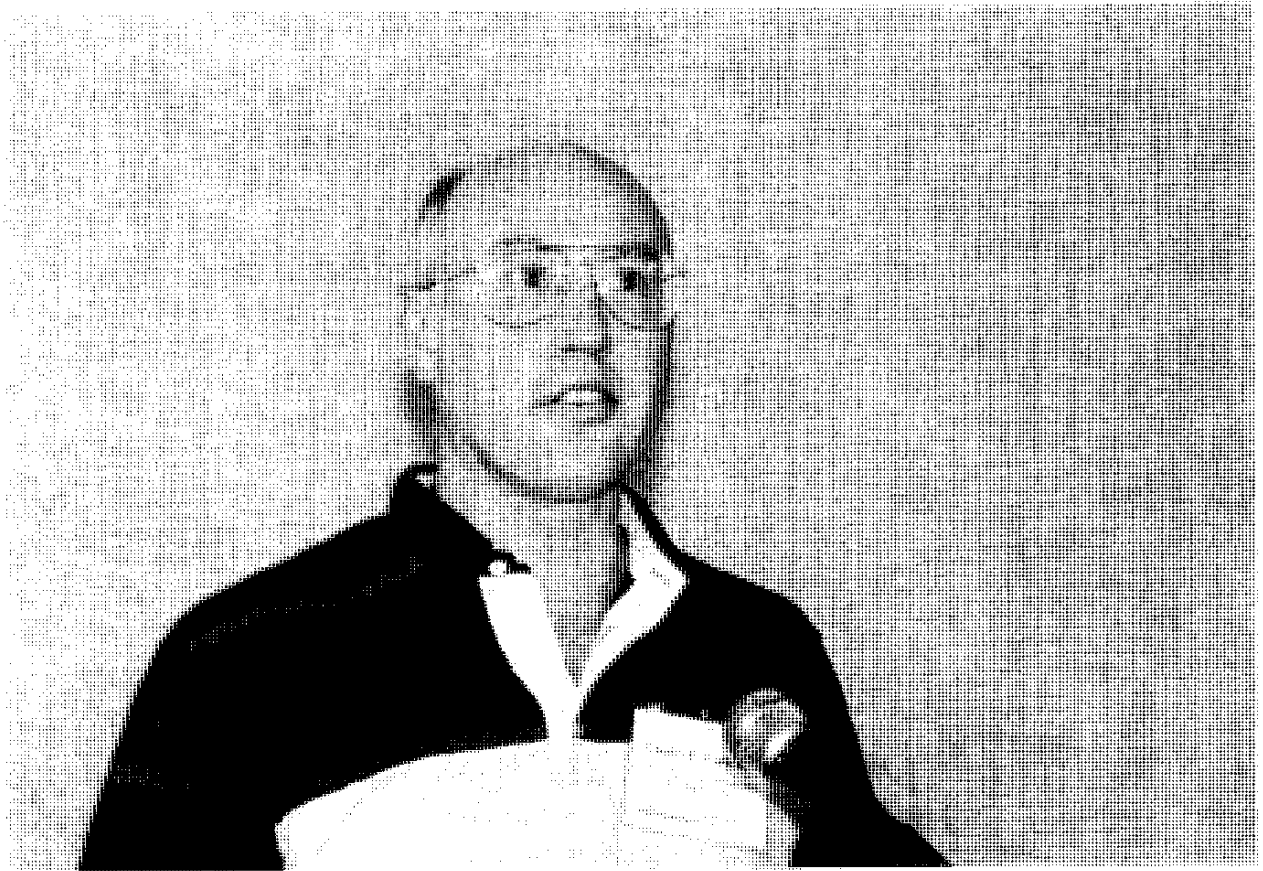
Objective:

To create a locally-composed New River Authority with regional joint powers to carry out all facets of New River clean-up.

Suggested Approach:

Follow the examples of the:

- Cascadia Corridor Commission established by the Parliament of Canada and U.S. Congress to manage problems between British Columbia and Washington State.
- The Air Quality Management District of El Paso, Texas, and Ciudad Juarez, Chihuahua.
- The bond issuing authority of the joint states of New York and New Jersey.



The American section of responses to the Mexican presentation at the CILA-IBWC meeting in March '95 presents the entire problem for the solution of the contamination.

ORIGINATORS:

Hermosillo on behalf of himself,
Gruenberg, Rascon, and Workman

Importance:

From the Mexican view, the Facility Plan will provide the solution to the contamination of the New River on the Mexican side.

Objective:

The Facility Plan will meet the objectives as stated in Minute 288.

Suggested Approach:

The Mexican government is awaiting a review by the American delegation in order to move forward.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Difficulty in addressing New River pollution because of involvement of sovereign nations (U.S. and Mexico).**

ORIGINATOR: Gruenberg

Importance:

Mexico lacks the resources to satisfactorily address the problem. The problem is impractical to fully address in the United States.

Objective:

Create a framework between the two nations to satisfactorily address the problem. Since Mexico lacks resources, the United States must be able to participate financially and technically in addressing the problem with Mexico.

Suggested Approach:

Implementation of binational agreements such as Treaty Minute 288 including appropriate state and local input.

ISSUE: **Combine forces and responsible authorities from both countries toward the joint resolution of the problem.**

ORIGINATOR: Hermosillo

Importance:

Separately, we have been unable to solve the problem in 60 years.

Objective:

To understand the problems and solutions proposed by both sides of the boundary in order to see how we can mutually solve the problem.

Suggested Approach:

That the responsible institutions form a working team and combine forces to resolve the problem.

ISSUE: **Advance the development of work already approved by the IBWC.**

ORIGINATOR: Rascon

Importance:

The means necessary for the long-term solution of clean-up problems of the New River are already approved in Act 288 of CILA, so that what is required is to carry out the approved actions.

Objective:

Clean up the New River to benefit the inhabitants of both sides of the international border.

Suggested Approach:

Carry out the approved work. If the United States wants Mexico to carry out actions or objectives different from those approved in Act 288, these desires should be presented and agreed upon in the core meetings of CILA.

ISSUE: **Separate competing forces on both sides of the border will naturally want to avoid economic costs and environmental regulation.**

ORIGINATOR: Workman

Importance:

- Allows status quo to continue: "Can't afford," "Economic loss of industry and job," "Agricultural competition will not allow costs to be incurred."
- The border is just a political demarcation that complicates solutions.

Objective:

Establish a framework to work within such that economic issues do not limit pollution solutions.

Suggested Approach:

- Create a steering committee.
- Establish action teams (include all interests).
- Encourage public involvement and committees to facilitate.
- Establish a funding committee.
- Form separate working committees that bring together interested parties: agricultural, industrial, etc.
- Provide public funds to best foster this framework. Put one agency in charge.



The need for cooperation of those persons using and associated with the New River.

ORIGINATOR:
Van De Graaff

Importance:

Without the full understanding and cooperation of everyone concerned, stumbling blocks will occur.

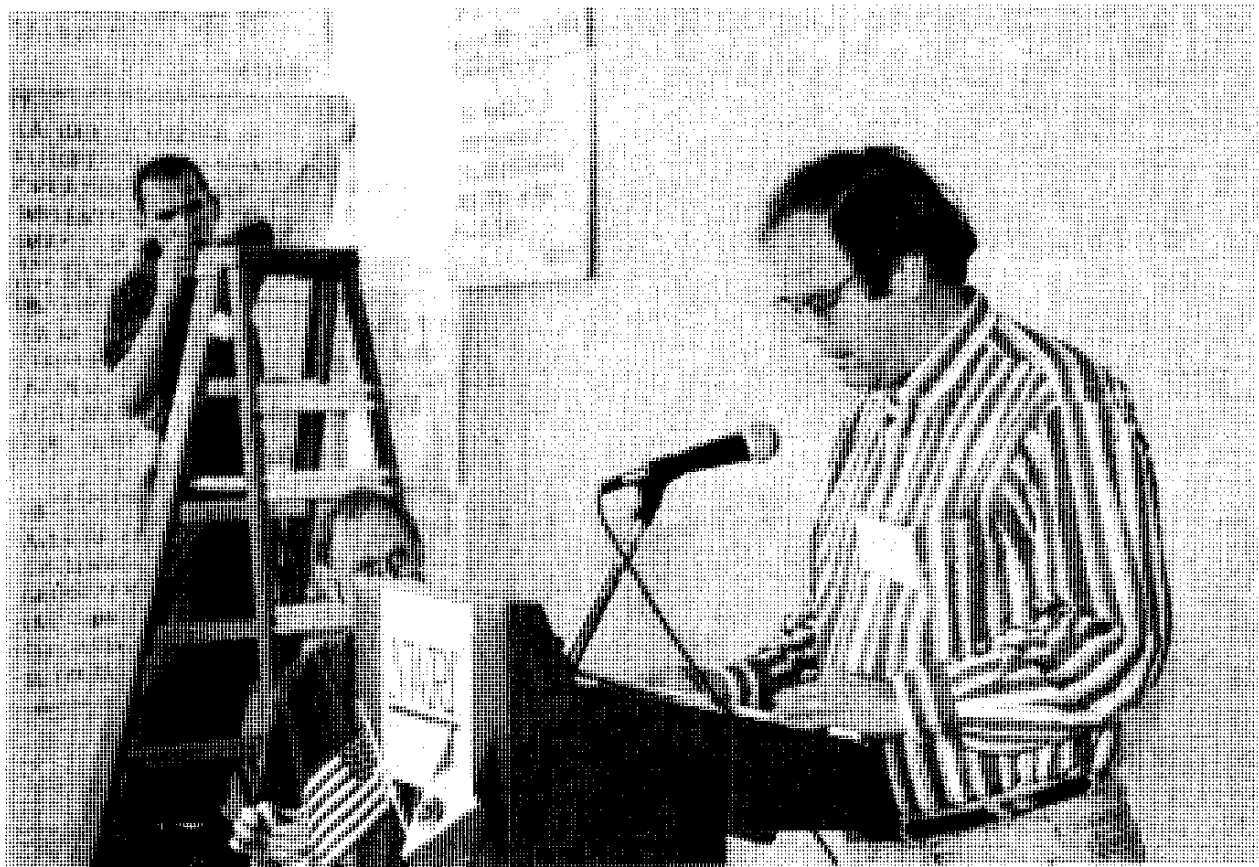
Objective:

Work to obtain full cooperation of everyone.

Suggested Approach:

If volunteer cooperation cannot be obtained, it should be mandated by the proper agency.





Using the New River as a case study, examine how institutional constraints presently affect the solution of transboundary resource problems.

ORIGINATORS:

Archibald on behalf of herself, Fege, Kiy, and Krauss

Importance:

Institutional design currently is prohibiting action. The relationships between federal, state and local agencies are unclear as are responsibilities.

Objective:

Use a case study of this area to help design new institutional arrangements and/or new institutions which can be used to implement the "new federalism" as it relates to transboundary resource problems.

Suggested Approach:

Encourage international and/or national agencies to fund a joint U.S./NRC and Mexican National Research Academy to study this issue.

The following issues were subsumed under the above summary priority issue:

ISSUE: **The current institutional arrangements do not allow for decision-making by state and local officials.**

ORIGINATOR: Fege

Importance:

The stakeholders with the greatest incentive to solve water quality problems in the New River are those who reside closest to the New River. There would be more urgency and a desire to find a solution if state and local officials could share decision-making with federal officials.

Objective:

Include in an official decision-making capacity, state and local officials from Imperial County, State of California, City of Mexico, County of Mexicali and State of Baja.

Suggested Approach:

Approach Washington, Mexico City, and the IBWC to ask for a change to the decision-making process to take advantage of the current trend of utilizing a bottom-up approach to decision-making. Have a coordinated strategy between state and local officials in Mexico and the U.S. to change the process. This will also help improve communications between the two countries.

ISSUE: **Make New River a model of new federalism; embrace local control to maximize economic value of resources.**

ORIGINATOR: Kiy

Importance:

Both U.S. and Mexican governments are undergoing fundamental changes in governance. In Mexico, President Zedillo is making "New Federalism" a priority giving municipalities more administrative and fiscal control. Accordingly, the local authorities of Imperial County and Mexicali need to seize the moment and begin pushing a joint powers authority to localize control and mobilize action on financing the New River clean-up.

Objective:

Increase local directives on addressing the New River clean-up and regional economic development.

Suggested Approach:

Establish a joint powers authority for Imperial Valley/Mexicali modelled after the Cascadia Carrier Commission on the Canada/Washington Border, and the proposed El Paso-Cd. Juarez air quality management district. To promote establishment of such an authority (New River Authority), additional analysis will be necessary specific to the economic benefits derived from the cleaner New River.

ISSUE: **Institutional barriers prevent federal agencies from effectively cooperating to plan, collect, share, and disseminate information with local and state levels.**

ORIGINATOR: Krauss

Importance:

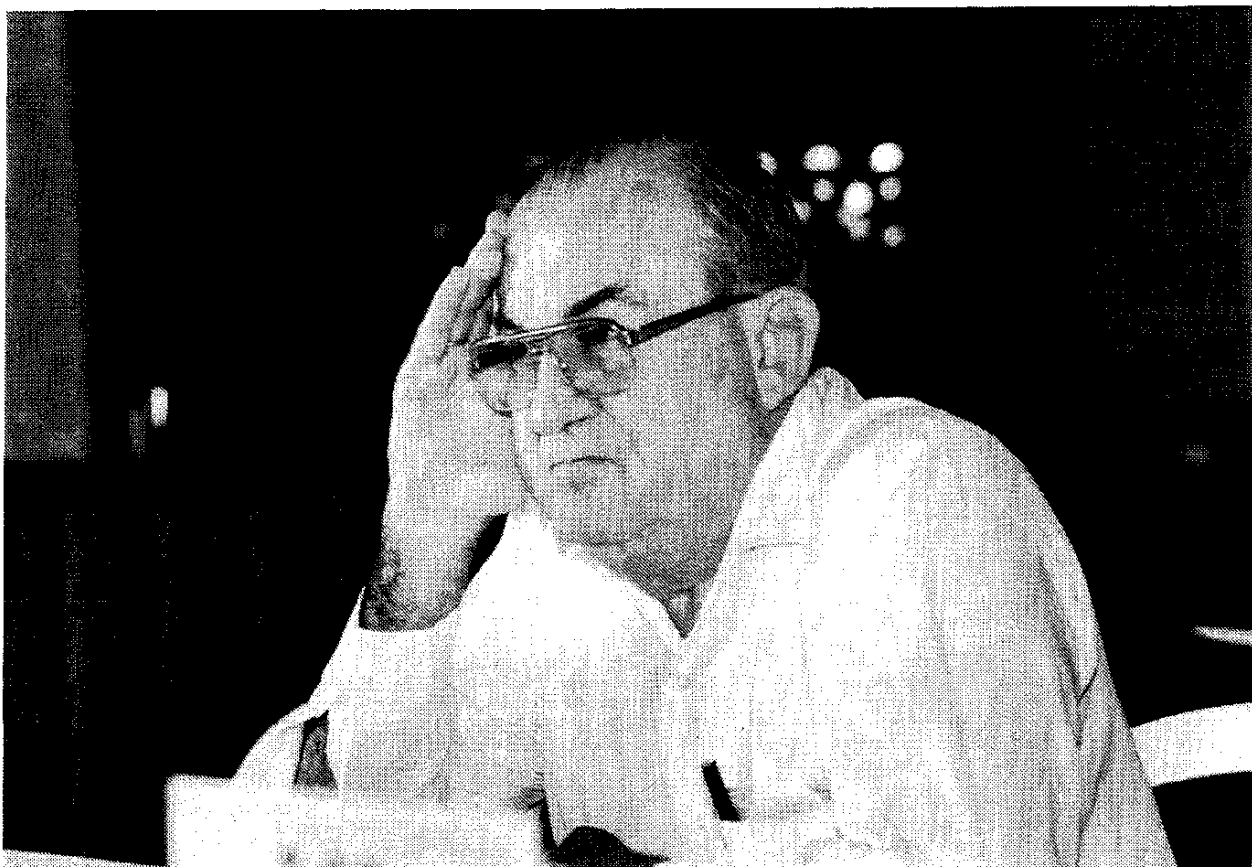
Lack of access to information on both sides of the border has been an impediment to local and regional water planning efforts. Politics and federal agency missions often prevent them from being open, flexible and innovative. There is a need to coordinate the collection of social, economic and technical information.

Objective:

Identify how government agencies may be more effective in a bilateral situation.

Suggested Approach:

Assemble a bi-national committee study under the U.S. National Research Council and the newly formed Mexico National Research Council as a vehicle that could independently evaluate institutional and bi-national arrangements. The study would provide a bi-national framework within which new institutions and existing federal agencies could better facilitate water planning efforts at the local level.



Need to specify water rights if we are to connect financing solutions to market-based approaches.

ORIGINATOR:
Archibald

Importance:

Technical solutions are well-known. Funding is not forthcoming. “Polluters” cannot pay and governments do not see this as a priority or cannot act in concert. Polluters have not seen the benefits of contributing to the solution, and private capital is being sought to fund improvements. If this is to happen, property rights to water must be defined (that is water rights are specified). This is especially critical in a bi-national situation.

Objective:

Assure legal mechanisms are in place so that property rights to water are sufficiently clear to allow for private investors.

Suggested Approach:

Assure legal mechanisms are in place to protect and for specific water rights.



Overcome legal impediments innovatively.

ORIGINATOR:

Ybarra

Importance:

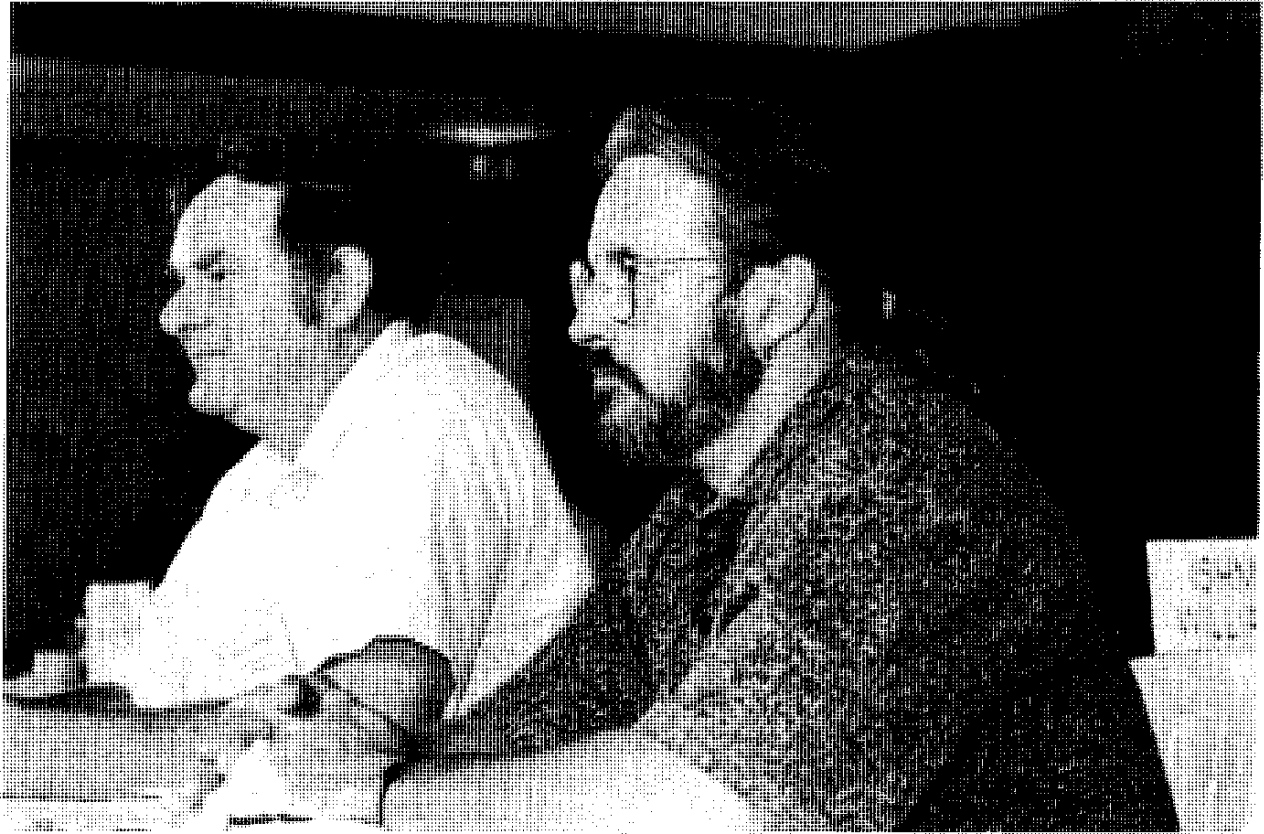
- The IBWC has been tasked to provide priority attention to border sanitation problems. The IBWC is opening up its cooperative agency involvement process.
- Constitutional Impediment = International agreements are federal domain. However, New Federalism promotes agency-to-agency/local-state government to local-state government cooperation.
- 1983 La Paz Agreement also promotes new federalism.
- BECC is a new approach to project development of financing that involves power sharing.

Objective:

Use imagination.

Suggested Approach:

Use these three bi-national agreements with imagination.



Asymmetry in conditions on each side of the border.

ORIGINATOR:

Rascon

Importance:

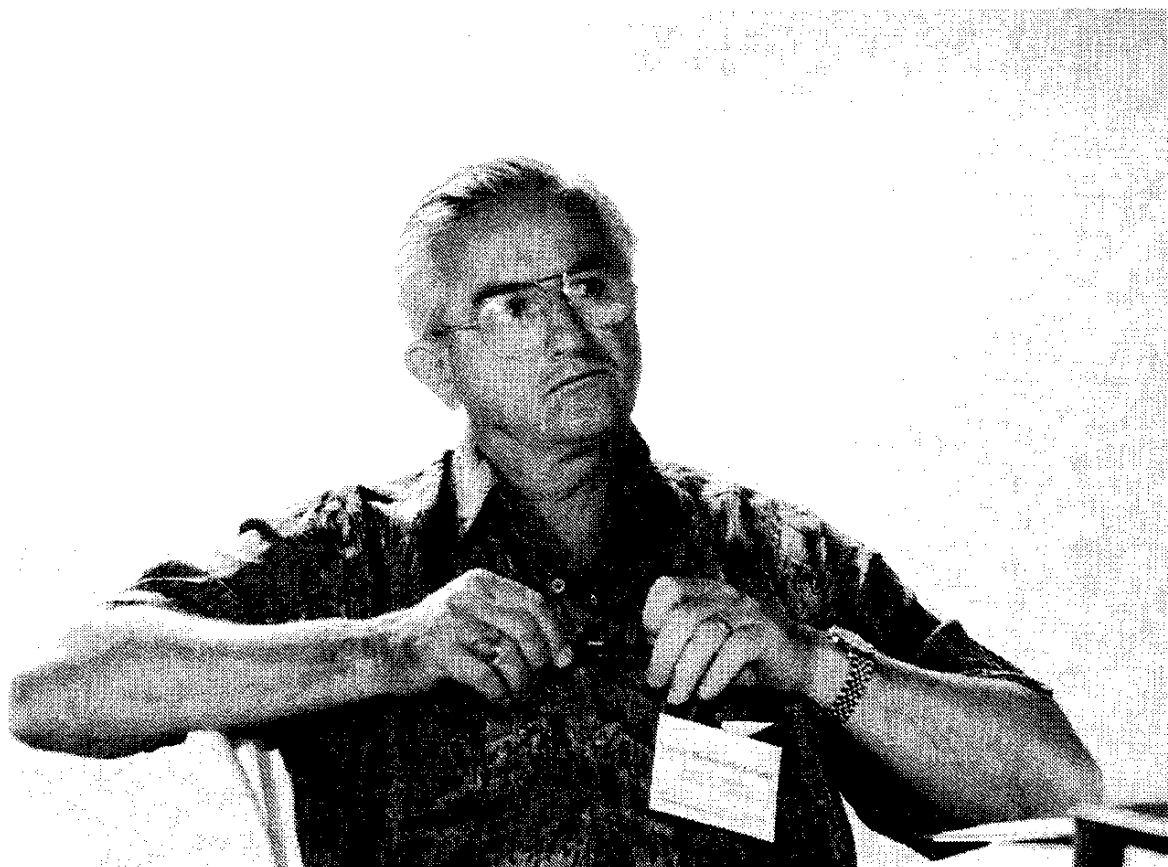
Differences exist in each country with respect to setting priorities in relation to which actions to carry out, the projects and types of work which are required, the kind of information to collect and organize, the construction time schedules contemplated, and the quality standards to be achieved. CILA is designed to attend to this asymmetry.

Objective:

Construct facilities that resolve problems in reasonable time frames even when these factors may not be those desired by the other country.

Suggested Approach:

Actions of an international character need to be coordinated via CILA.



There is a lack of intent and of clarity in the solution of the problem.

ORIGINATOR:
Sandoval

Importance:

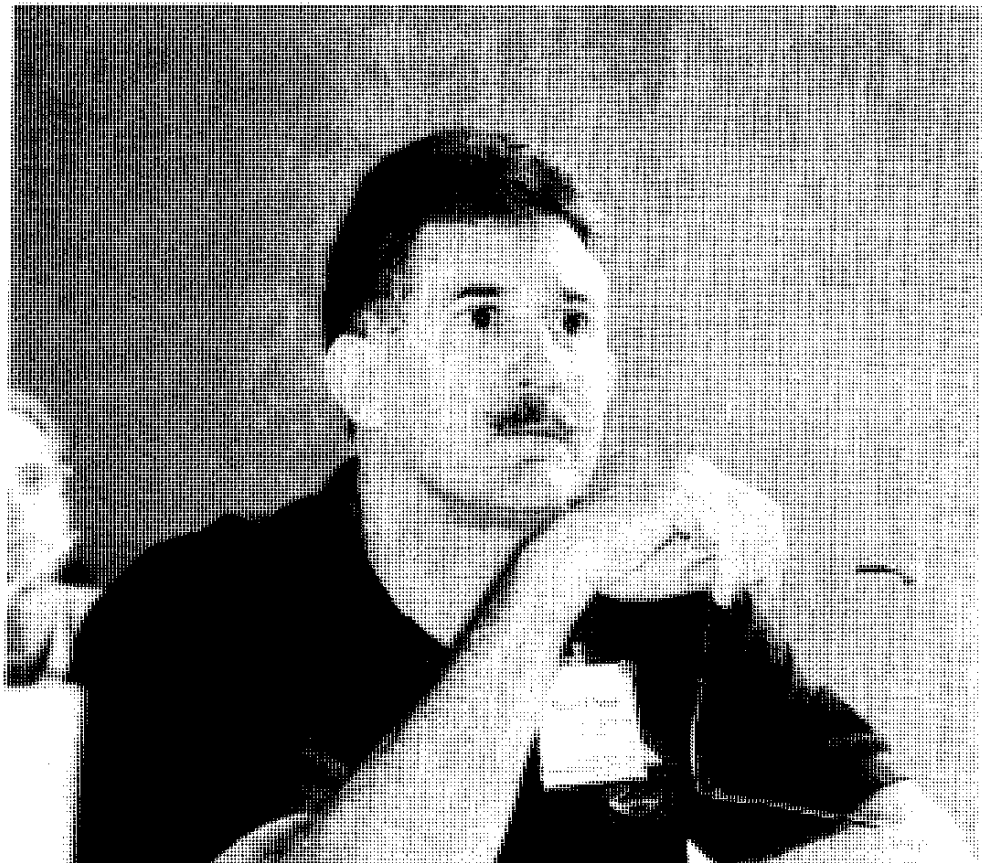
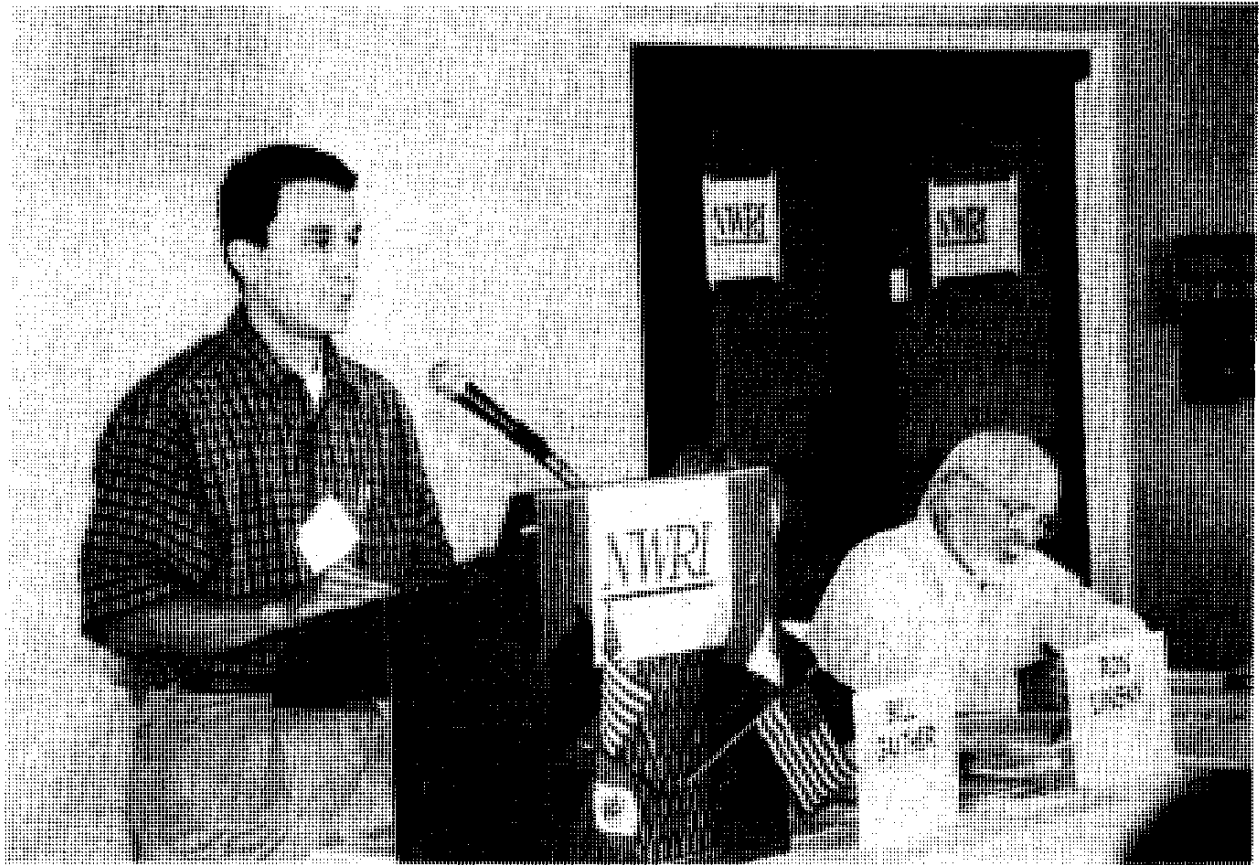
There have been meetings of CILA (on both sides), but it seems that not all the cards have been shown on the table. The study presented by Mexico has not had any response, nor has there been a detailed revision.

Objective:

Initiate a solution to the problem.

Suggested Approach:

May some clarity exist in the negotiations that are being realized in CILA.



Anaerobic conditions and pathogenic organisms in the New River as it enters the U.S. at Calexico.

ORIGINATOR:

Setmire

Importance:

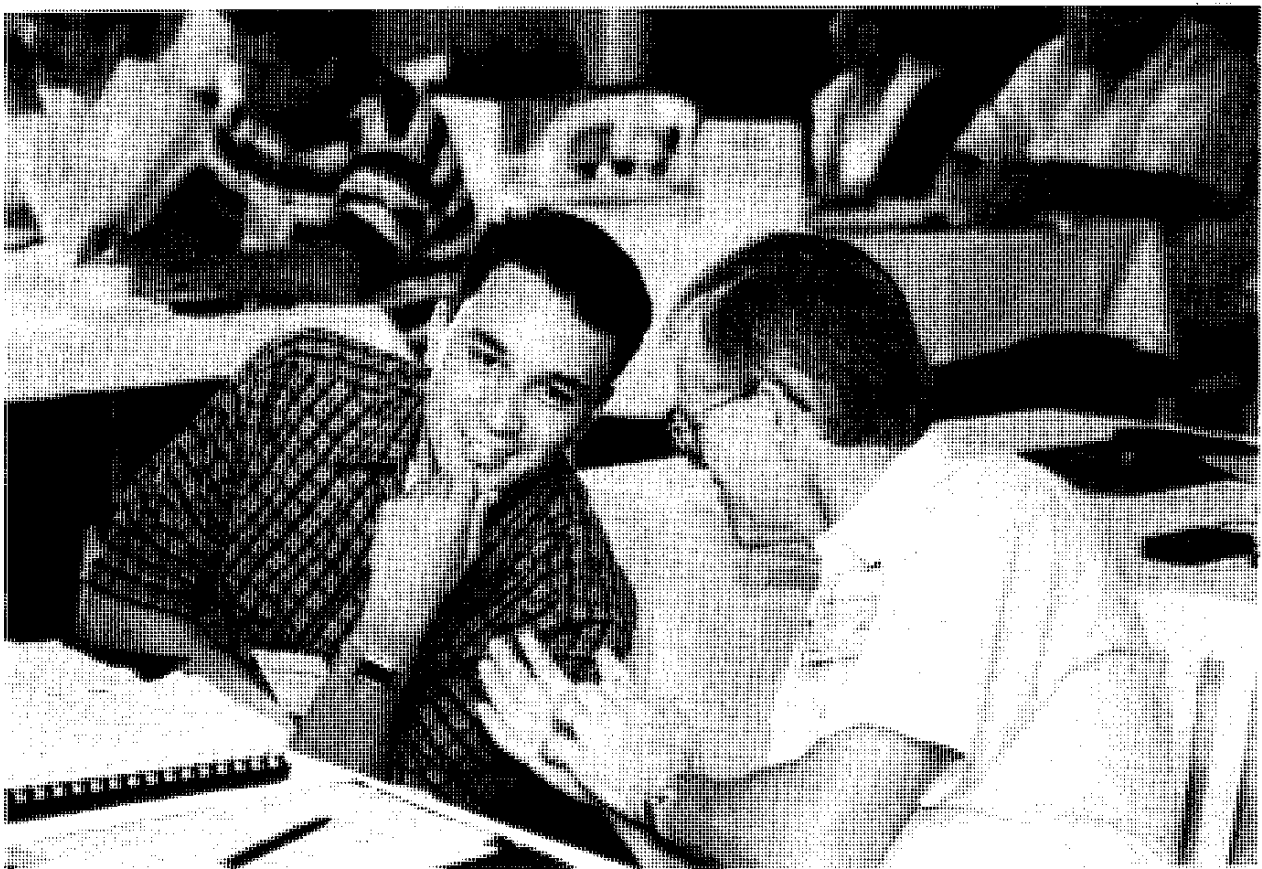
The New River entering the United States is a health hazard to the people of the Imperial Valley. As with any water body, the New River is an attractive nuisance for people unfamiliar with the area and is an unusable water body for those living in the area. No beneficial life is found in the first 20 miles of river due to the lack of dissolved oxygen.

Objective:

Aerate and chlorinate the water in the New River as it enters the United States to kill the pathogenic organisms and speed up the natural recovery processes of the river.

Suggested Approach:

A rock weir near Seeley is the first location on the New River where any significant reaeration occurs. A drop structure could be placed immediately below the border. This structure would be similar to Drops one, two, or three farther downstream in the New River. The water below the drop could be chlorinated. A second drop structure would be placed several miles downstream allowing sufficient time for the chlorine residual to decrease. This structure would help decrease any remaining chlorine residual and further reaerate the water. These structures would not replace necessary collection and treatment facilities in Mexicali. They would be simple and comparatively inexpensive to construct and would help decrease the health risk in the United States. They also would significantly increase the natural recovery process occurring in the river.



U.S. agricultural runoff water quality addressed and managed under Imperial Irrigation District Drainage Master Plan (provide information to Mexico).

ORIGINATORS:

McCullough on behalf of himself, Gruenburg, and McNeece

Importance:

Improvement of New River water quality includes recognition and effort on the agricultural non-point source issues. Fertilizer, pesticide, and selenium impacts need to be addressed at the least cost.

Objective:

Document the degree of the problem; prepare initial plans; implement the plan to improve the New River water quality.

Suggested Approach:

- Complete the Drainage Master Plan addressing water quality improvement.
- Include Tests of Technology.
- Determine and communicate economic costs.
- Provide appropriate Mexican officials with periodic information on the planning process, the final plan, and any updates.

The following issues were subsumed under the above summary priority issue:

ISSUE: **Technology for removal of many agricultural non-point source pollutants has not been effectively tested for efficacy in the local area.**

ORIGINATOR: Gruenberg

Importance:

Questions on effectiveness of agricultural pollution removal need to be answered before widespread implementation is practical.

Objective:

Test agricultural non-point source pollutant removal using site-specific demonstration projects in Imperial Valley.

Suggested Approach:

Continue to encourage the Imperial Irrigation District to take the lead in this effort. Promote community support.

ISSUE: **Economic cost to local community in addressing agricultural non-point source pollution control.**

ORIGINATOR: Gruenberg

Importance:

Cost effectiveness is an important consideration in addressing the problem.

Objective:

The cost/benefit to the community needs to be explained.

Suggested Approach:

Encourage demonstration project implementation by Imperial Irrigation District.

ISSUE: Agricultural runoff in the United States is not an element of the international New River problem.

ORIGINATOR: McCullough

Importance:

The Imperial Irrigation District (IID) is aggressively pursuing the issue of water quality as a part of the drainage master plan which is currently being prepared. This plan will address the pesticide, selenium and other water quality constituent concerns. The Regional Water Quality Control Board is cooperatively involved with the IID in the preparation of the plan. There does not appear to be any international issues.

Objective:

Recognition should be given to the efforts of the IID in addressing the U.S. agricultural-related water quality issues on the New River. The objective would be to remove the U.S. agricultural water quality issues from the international effort.

Suggested Approach:

Make reference to the IID drainage master plan as the mechanism to address and assure necessary attention and resolution of agricultural drainage water quality issues. This approach will allow effort and resources to be focused solely on the border issues for resolution. Agricultural areas in Mexico may benefit from the documentation and elements of the IID drainage master plan.

ISSUE: Current farm practices in the Salton Sink produce large amounts of runoff water laden with fertilizer and pesticides.

ORIGINATOR: McNeece

Importance:

While the issue of sewage and industrial waste receive most attention, agricultural wastewater also impacts on beneficial uses of the New River and adjacent lands.

Objective:

Any clean-up plan must include methods to reduce the impact of agricultural practices on New River water quality.

Suggested Approach:

The Salton Sea authority and the County of Imperial should request on-going efforts by the Imperial Irrigation District, University of California, Cooperative Extension, the local Farm Bureau and the Imperial County Agricultural Commission.

U.S. and Mexico agencies to build areas of cooperation, sources of data, research tools, and design solutions to international environmental problems.

- Work closely with all local entities and agencies with regulatory interests and jurisdiction to incorporate the research, concerns and solutions generated thus far as a Foundation for research.

ISSUE: **Assess sources of non–point source pollution with Geographical Information Systems technology.**

ORIGINATOR: Williams

Importance:

Non–point source pollution is a complex process of water contamination that can best be assessed and monitored through tools such as GIS that permit dynamic modeling.

Objective:

Integrate GIS approaches with the existing water quality databases and mitigation design options for a comprehensive approach toward identification of type and extent of non–point source pollution.

Suggested Approach:

Design approach incorporating existing water quality databases and building on new sources of digital data such as satellite imagery, irrigation data, detailed soils, topographic models, and non–point source models.

ACTION PLANNING...WHAT WAS CONCLUDED

The second day opened with a review of the results from the previous day's workshop. Attention was drawn to the top ten priority issues which were posted on the walls of the workroom. Under each priority issue, stated in both English and Spanish, were three items of information. The first item was a list of participants who had contributed text to each issue. The second and third items were the Strength of Feeling (See Appendices C,D,E, and F) expressed as a percentage, for each of the participant groups representing Mexico and the United States.

The original purpose of the second day's session was to create an action plan that would answer the question, "Now that we have identified and prioritized the issues, what do we do next?"

To set the tone, briefings were conducted by three members of the organizing committee who presented their thoughts on the current state-of-the-art in the following areas:

- | | |
|-------------------------------------|---------------------|
| • Data and Information Needs | Andrew L. Lissner |
| • Water Treatment Technology 1995 | Donald J. Martinson |
| • New River Financing Consideration | Anthony Wetherbee |

The intent of these brief presentations was to provide information that would encourage the workshop participants to consider various alternative solutions to the critical issues identified during the first day of the workshop.

As a starting point, a strategy was outlined that would lead to developing concrete action plans for each of the identified issues within a period of 90 days after the close of the workshop. The purpose of the action plans is to prompt the timely closure of the prioritized issues.

The following steps were offered to accomplish the Working Group strategy:

- STEP 1. Create Working Groups for each of the top ten issues. Supplement each Working Group with experts, if needed.
- STEP 2. Each Working Group would meet as needed to craft an action plan taking advantage of the momentum of the workshop to resolve their particular issue.
- STEP 3. Each Action Plan would be completed within 60 days after convening the Working Groups. Each Working Group's plan would then be circulated to all workshop participants, and others as required. Each Working Group would present its plan at a one-day Issues Conference which will be scheduled on or about the 90th day after the close of this workshop at which time general and specific discussions would be encouraged among the interested parties.

Considerable discussions were held regarding the formation of working groups, and some participants indicated that they would be willing to serve on one or more of the working groups. However, others expressed concern that a “working group” was just a pseudonym for a committee, and they would not encourage the formation of yet another committee whose meetings they would have to attend. It was clearly stated that there were enough committees and organizations already involved with the issues. Organizing another committee was clearly not welcome.

A certain level of frustration became evident as the assembled participants could not individually or collectively identify nor agree upon acceptable strategic steps, if any, needed to hasten the closure of the issues identified during the workshop.

It also became evident during the often vigorous discussions that a number of institutional and political factors appeared to be aligning positively toward completion of several pending issues associated with improving the water quality of the New River.

The following conclusions were reached during the workshop:

- All participants agreed that a significant amount of work has been underway for a considerable time, but closure has not been forthcoming in a timely manner.
- The participants agreed that continuing bilateral dialogue, as demonstrated at the workshop, is not only useful but would no doubt contribute significantly to hastening initiation of many New River projects.
- Agreement was also demonstrated by the participants that organizing new committees was not necessary to accomplish clean-up of the New River.
- It was also recognized that a need exists for a protocol to enhance information transfer within the existing committee structure.

Recommendations

The workshop provided a unique opportunity for the NWRI to gain a first-hand knowledge of the institutional constraints facing the governments of Mexico and the United States as regards the resolution of transboundary environmental problems. The need to streamline and/or redesign transboundary transactions emerged as a significant issue from the discussions among and between the bi-national participants. For many participants, the workshop represented their first opportunity in a bilateral setting to interact in a meaningful dialogue regarding critical issues associated with the New River. The origin of such a barrier to communications might well be traced to the current institutional arrangements existing within those organizations responsible for transboundary issues. If both governments desire to move forward with what has been termed a new paradigm, both may want to consider the following recommendations.

- Promote information transfer immediately between all parties by encouraging stronger linkages between the bilateral components concerned with the New River issues.

- Provide opportunities for bilateral representatives to meet on a more regular basis with the broad general goal of strengthening consensus-building capacities within the existing bilateral decision-making processes.
- Enhance immediately the opportunities to actualize the new vision or model of transboundary environmental programs which encourages local empowerment.
- Encourage creative approaches to the issues identified in the workshop by encouraging coalitions of bi-national agencies and empowering them to make decisions that will enhance problem-solving processes of transboundary issues.
- Nurture the momentum and enthusiasm demonstrated by the participants at the workshop by moving forward in a timely fashion the decision-making processes that will actually achieve the goals and objectives set forth in Minute 288.





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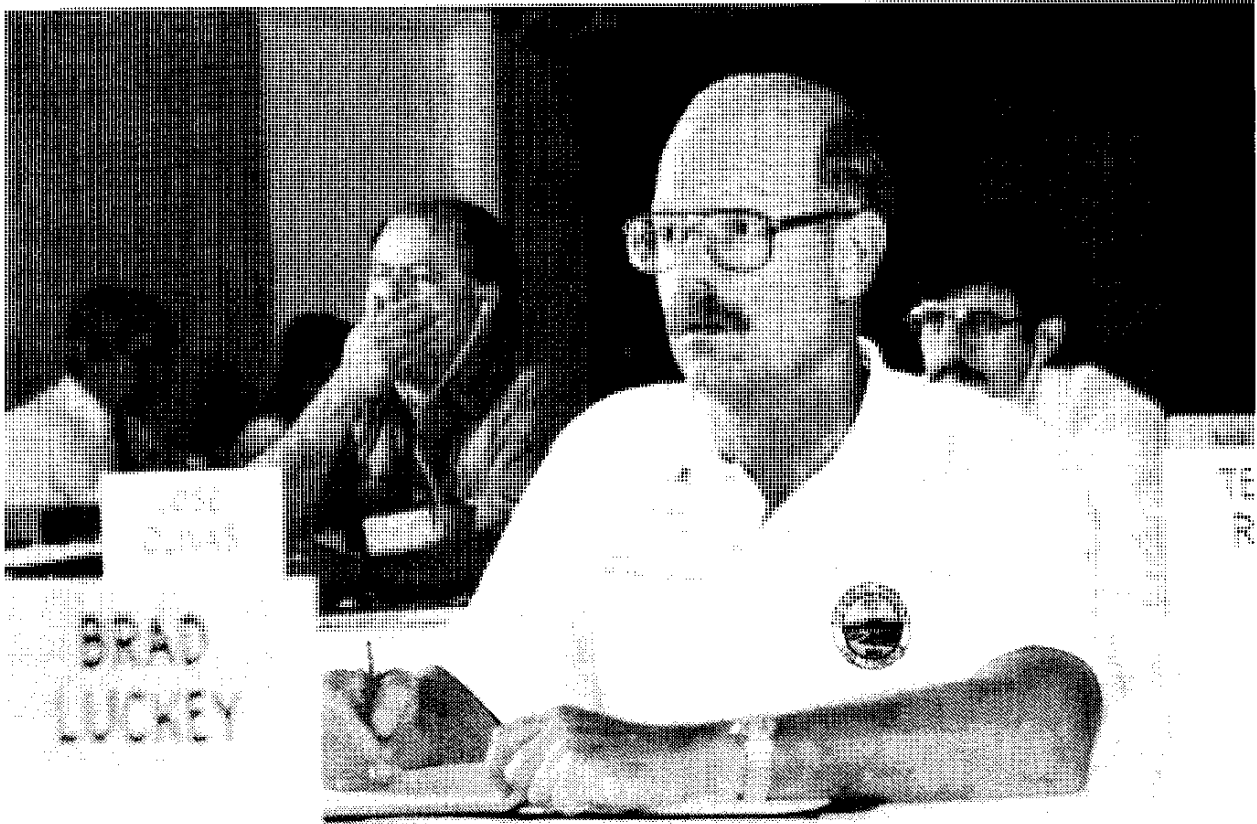
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A P P E N D I C E S

APPENDIX A

Glossary

Abbreviations and Acronyms

BECC	Border Environmental Cooperation Commission
CESPM	Comision Estatal de Servicios Publicos de Mexicali
CILA	Comision Internacional de Limites y Agua
CRWQCB	California Regional Water Quality Control Board
GIS	Geographical Information Systems
IBWC	International Boundary and Water Commission
IDB	International Development Bank
IID	Imperial Irrigation District
NADBANK	North American Development Bank
NAFTA	North American Free Trade Agreement
NGT	Nominal Group Technique
NRC	National Research Council
NWRI	National Water Research Institute
O&M	Operations and Maintenance
SAIC	Science Applications International Corporation
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

Background Paper

BI-NATIONAL WORKSHOP ON THE NEW RIVER, CALIFORNIA/BAJA CALIFORNIA, MEXICO (May 19-21, 1995)

This paper is intended to provide an overview for workshop participants of some of the history and issues associated with the New River. Included is a brief summary of the historical origin of the river, general types of contamination and environmental concerns, bi-national policy considerations, and a synopsis of financial and technological challenges. Multiple local, state, and federal agencies, environmental groups, academicians and scientists, and public participants from the United States and Mexico have contributed substantial effort over the past 40 years to address real and perceived problems and potential solutions to contamination of the New River. By bringing together key representatives of stakeholder groups, this workshop will identify and prioritize key issues and provide suggested approaches for their resolution.

Numerous documents, reports, and articles, including McNeece and Zielinski (1993), Dillin (1994), McClurg (1994), Rice (1994), and Fitch (1995) have addressed issues associated with the New River. A recent (1992) document, Minute No. 288 from the International Boundary and Water Commission (IBWC), represents a key, binationally-derived summary that provides an important backdrop for the present paper (see Appendix A). The Minute includes a recommitment to earlier (1980) IBWC Minute 264 that was directed at "elimination of domestic and industrial wastewater discharges in the New River at the international boundary, as well as implementation of long-term actions for final disposal of these wastewaters and their conveyance away from the international boundary." Results of the workshop will address possible approaches to resolve these and other goals for clean up of the river, based on today's regulations, institutional cooperation, technologies, and financial settings.

History of the New River

The New River, originating approximately 22 miles (35.3 kilometers) south of the international border in Baja California, Mexico, flows northerly through Mexicali, across the border at Calexico, California, and approximately 60 miles (96 kilometers) to the Salton Sea (IBWC Minute No. 288; McClurg, 1994) (Figure 1). The river was created inadvertently in the early 1900's as a result of flooding by the Colorado River through a human-engineered bypass in the Imperial County Canal. The bypass, intended to ease siltation of the irrigation canal, and the subsequent flooding resulted in the New River channel and the Salton Sea into which the river drains (McClurg, 1994). The present-day river channel flows generally through farmlands and a few small communities in Mexico and the United States, in addition to the larger, expanding cities of Mexicali and Calexico. North of the border, the river is situated southwest of the Chocolate Mountains and east of the Superstition Mountains, passing close by the cities of Seeley and Brawley.

Average river flows at the international border are approximately 200 cubic feet per second (cfs), with flows from Imperial County contributing an additional 400 cfs prior to discharge into the Salton Sea (Briefing Paper on New River Pollution: A U.S./Mexico Border Issue; California Regional Water Quality Control Board, Region 7, February 1995).

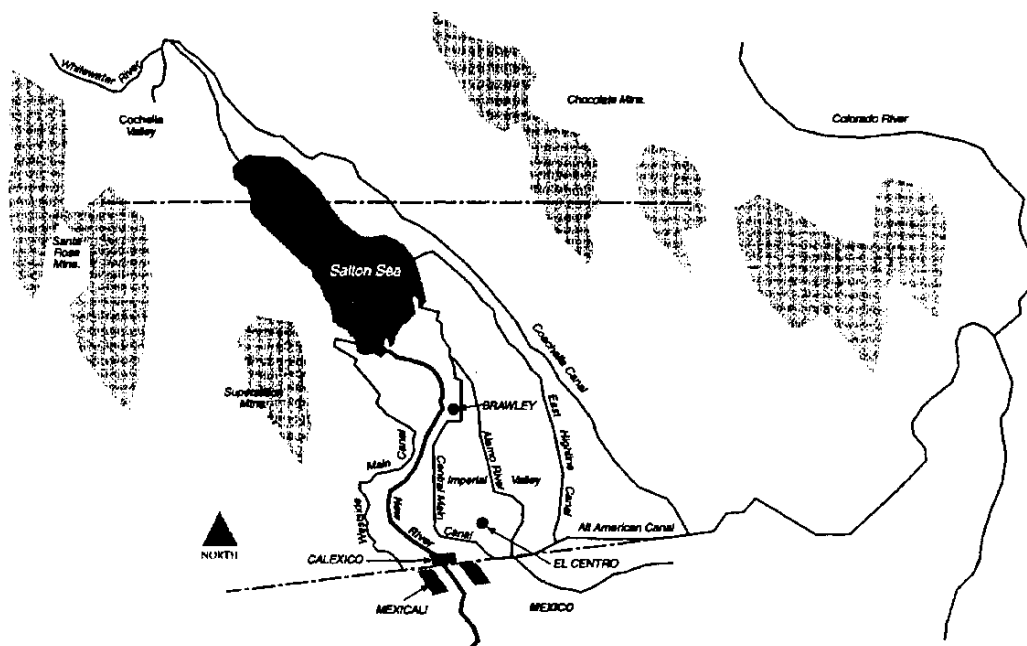


Figure 1

General Types of Contamination

Present-day New River flows are dominated by untreated or partially treated domestic and industrial wastewaters from Mexico and agricultural drainage from Mexico and the United States (IBWC Minute No. 288; McNeece and Zielinski, 1993). Discharges of up to 23 million gallons per day (MGD) of domestic and industrial wastewaters flow across the border from Mexicali (Dillin, 1994). Types of contaminant sources also have included slaughterhouse waste and discharges from a paper mill. The combination of these flows has resulted in a river system that is arguably one of the most contaminated in the U.S. (Dillin, 1994; McNeece and Zielinski, 1993; Fitch, 1995). Results from monitoring studies by the California Regional Water Quality Control Board (CRWQCB) and U.S. Environmental Protection Agency (EPA) indicate that the river represents a significant human and environmental health hazard (Dillin, 1994). Specific contaminants include high bacterial and viral concentrations; chemical contaminants including pesticides, heavy metals, and oil and grease; and high nutrient (nitrogen and phosphorous) loads (McNeece and Zielinski, 1993). The domestic and industrial wastewaters originate primarily in Mexico. However, other chemical contaminants, including the pesticides DDT (primarily from historical residues) and toxaphene and the trace element selenium, appear to be due primarily to agricultural drainage from Imperial County farmlands (McClurg, 1994).

Environmental Effects

From an ecological standpoint, the first 20 miles of the New River, north of the international boundary, are considered to be highly impacted and devoid of many typical aquatic species (Dillin, 1994). This is partly due to high nutrient and domestic sewage loads that reduce concentrations of dissolved oxygen in the river, thereby affecting many fish and aquatic invertebrate populations. Concentrations of dissolved oxygen are far below U.S. federal standards in many parts of the river. Limited monitoring data suggest that some fish in the river contain high levels of PCBs, pesticides, and mercury. Nonetheless, some studies suggest that many of the pathogens and industrial pollutants originating in Mexico have dissipated or settled to the river bottom before they reach the Salton Sea (McClurg, 1994; CRWQCB, 1993, Salton Sea Briefing Paper).

Human health concerns are related primarily to high bacterial and viral concentrations. For example, bacterial levels in the border region of the New River typically exceed U.S. body contact standards by many thousands of times, and are up to 4,000 times higher than standards for non-contact sports such as boating (Rice, 1994). The present concentrations of chemical contaminants are considered less harmful to human health than are the bacterial and viral contaminants.

Bi-National Policy Considerations

Environmental problems and public health risks associated with the New River have been discussed by policymakers from the United States and Mexico for many decades. In 1950, for example, a bill was passed in the U.S. Congress authorizing the U.S. Secretary of State to discuss plans and to work out the construction of a "sanitation project" for both Calexico and Mexicali. From 1962 to 1976, Mexico expended substantial effort to build a collector system and treatment facility in Mexicali. Since then, several other attempts have been undertaken to address the New River question, including the 1992 signing of IBWC Minute No. 288, and the designation of the New River as a priority concern in the bilateral Integrated Environmental Plan for the U.S.-Mexico Border, First Stage 1992-1994 ("the Border Plan") released by EPA and Mexico's environmental secretariat.

Minute 288 and the Border Plan both addressed the need for the replacement, rehabilitation, and installation of major sewage collectors in the older Mexicali II sectors of the City of Mexicali. The Minute also called for the rehabilitation and construction of treatment and disposal facilities and for improved and new pumping facilities. Under the IBWC plan (originally estimated at \$150 million), Mexico would finance and carry out the project, essentially to Mexican standards, but the United States would have an opportunity to share in the financing of certain components to meet U.S. standards.

At the Minute signing ceremonies, then-U.S. Commissioner Narendra Gunaji proclaimed that as a testament to the optimism generated by the agreement, he would hope to come back to the Imperial Valley in 1995 and swim in the river. Yet, in spite of commitments made by both the United States and Mexican Governments, few concrete actions have been taken to construct a treatment facility that would make Gunaji's gesture feasible.

Problems associated with clean up of the New River are not unique to Mexicali and the Imperial Valley, but are indicative of challenges faced by similar communities along the entire U.S.-Mexico border. In the case of the New River, among the greatest challenges are overcoming the complex institutional impediments that arise from the over 30 federal, state, and local agencies and various interest groups (industry, agricultural, consumer, and environmental) from both countries that are stakeholders in solving these problems. The following is a list of some of the agencies with a direct interest in the New River:

Border Environmental Cooperation Commission
North American Development Bank
U.S. EPA
U.S. Department of State
International Boundary and Water Commission, U.S. Section (CILA in Mexico)
U.S. Department of Interior
Federal Bureau of Reclamation
U.S. Geological Survey
U.S. Fish and Wildlife
Secretaria de Medio Ambiente, Recursos Naturales y Pesca
Secretaria de Relaciones Exteriores
Secretaria de Agricultura y Recursos Hidraulicos
Comision Nacional de Aguas (CNA)
Comision de Obras Publicas
Estado de Baja California
California Regional Water Quality Control Board
California Water Resources Control Board
California Health Department
California Department of Fish and Game
California Department of Water Resources
Metropolitan Water District of Southern California
Riverside County
Imperial Valley Irrigation District
Imperial County Health Department
Imperial County Board of Supervisors
Imperial County Agricultural Commission
Environmental Health Services, Imperial County
Ayuntamiento de Mexicali

At the local and state level, a variety of efforts have been taken over the last three years to resolve the many significant issues associated with the New River. Largely because discharges to the river are causing impacts to the ecosystem of the Salton Sea, the Board of Supervisors of Riverside County called on the U.S. EPA in early 1993 to make clean up of the New River a top priority. In December 1993 the County of Imperial lodged a similar complaint to EPA in the form of a legal petition under the Toxic Substances Control Act (TSCA). The petition alleged that EPA had failed to fulfill its legal responsibilities under TSCA to minimize industrial discharges to the New River. The petition further called on EPA to work with the County and the Mexican Government to implement an international solution to clean up the river. Since this legal action, two additional petitions under TSCA Section 21 have been filed by environmental groups concerned about the New River.

To address these types of concerns, in September 1994 EPA issued administrative subpoenas under Section 11 of TSCA to 95 U.S. parent companies operating Mexican maquiladora facilities in the vicinity of the New River. These subpoenas were aimed at obtaining information about chemical discharges into the New River so that U.S. and Mexican federal, state, and local governments could better understand and take action against the risks involved.

Additionally, in an attempt to accelerate federal action in securing funding for the New River clean up, in December 1993 the Board of Supervisors of Imperial County and the State of Baja California signed a memorandum of understanding (MOU) on cooperative efforts to address environmental contamination of the river. The MOU recognized conceptual plans for wastewater remediation set forth under IBWC Minute 288, yet called for the construction of a treatment facility on the United States side of the border to more adequately treat New River effluent. Under the MOU, the County and State agreed to work together and provide support in both Washington D.C. and Mexico City to secure funding to implement the plan. The State of Baja California also agreed to raise some of the necessary funding through the assessment of user fees.

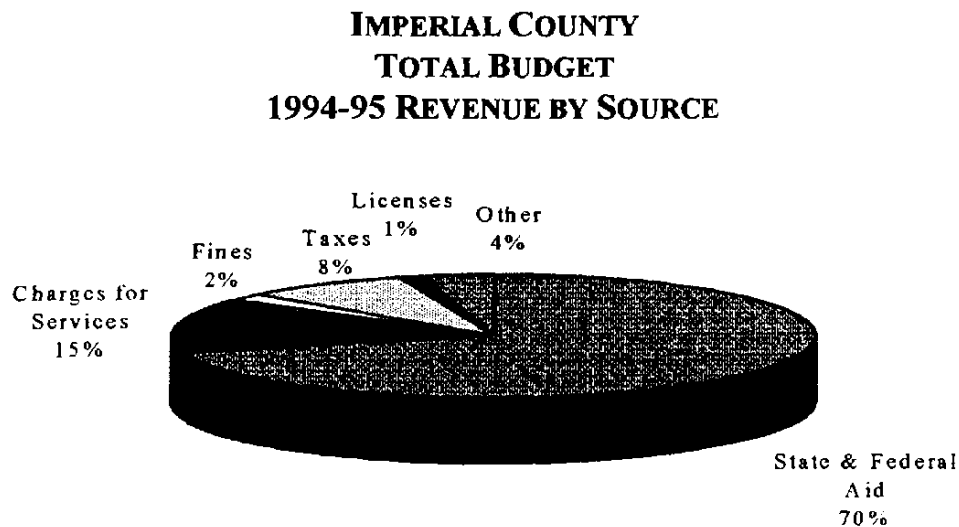
Financial Challenges

In addition to institutional impediments, a number of financial and political obstacles have arisen since the signing of IBWC Minute 288 which have further complicated efforts to proceed with project planning and construction initiatives associated with the New River. Many of these obstacles have been associated with a reluctance by the U.S. Congress to finance construction of a treatment facility through a general line item appropriation. EPA has been denied funding requests for the New River in each of two recent Fiscal Year (FY) appropriations cycles: FY 93 and FY 94. Somewhat in contrast, the U.S. Congress has earmarked for FY 95 a total of \$47.5 million for a series of planned border wastewater treatment projects, including the New River. Of this, an estimated \$10 million is specifically available for the New River for initial planning and design of a treatment facility.

Since the passage of North American Free Trade Agreement (NAFTA), the Border Environmental Cooperation Commission (BECC) and the North American Development Bank (NADBANK) have been established to facilitate the financing of border environmental infrastructure projects like the New River (see BECC and NADBANK fact sheet, included as Appendix B). Funding totaling \$450 million for the NADBANK was earmarked to come from contributions made by the United States and Mexican Governments over a four year period. Through guarantees and some loans it is envisioned that governmental paid-in capital to the NADBANK will leverage up to \$2-3 billion in private sector monies for environmental infrastructure projects along the U.S.-Mexico border. Yet, to date only \$112 million (or \$56 million each) has been contributed by the two governments. Largely due to Congressional concerns over the border environmental funding, long-term secure financing for both the BECC and NADBANK remains a lingering concern.

Notwithstanding, there is a continued hope that the BECC and NADBANK, with adequate funding, will provide the institutional leadership necessary to address New River funding issues and others like it along the border. The importance of the BECC and NADBANK to projects such as the New River is underscored by the recent need to facilitate the financing of priority environmental infrastructure projects in a climate of increased economic uncertainty in Mexico. In this regard, soaring interest rates—above 86 %—have made once viable projects not presently financeable. As an example, \$368 million financed by the World Bank for the Northern Border Environmental Program (of which Mexicali was expected to receive some assistance for the New River), has effectively been put on hold while the terms and conditions of this loan are revisited.

At present, the governmental entities and related agencies within the County of Imperial may be the most suitable to lead the implementation of a modern, but cost effective wastewater treatment program. This locally led financing course would need to be complimented substantially by the technical and financial resources of the BECC and the NADBANK, with full endorsement by EPA and the IBWC, among other agencies. This broad-based funding support is particularly important based on economic considerations associated with the County of Imperial. Of the 58 counties in California, Imperial County has the lowest per capita income level, coupled with one of the highest unemployment rates (28 %). The County has depended on State and Federal aid for 60-70 % of its annual revenue sources since 1990 (Figure 2). The agriculture industry is the predominant source of revenues for the County economy (gross income in excess of \$1 billion



Source: County of Imperial

Figure 2

in 1993). This ranks the county in the top ten agri-counties in the U.S., but the lack of industrial diversity limits revenue sources.

A full financial feasibility analysis will be necessary to evaluate the various project finance structures and scenarios to accommodate locally issued debt. This debt would need to be supported by annual grants/applications from federal multi-lateral banks or other governmental sources, along with conventional credit

enhancement mechanisms. To finance a modern and innovative water treatment program for the New River, it will be necessary for cooperation to be provided on a local, state, and federal level.

The New River solution provides an excellent opportunity for local entities such as the County of Imperial to benchmark an approach which can be utilized on a bi-national and local level for many other essential border infrastructure projects.

Technological Challenges

The New River contamination problems represent a substantial challenge to the technology of pollution control, especially due to the many sources of pollution. In order to make any progress in alleviating environmental and human health concerns, a combination of many different pollution control techniques that have evolved in recent years likely will be necessary.

For example, traditional, low cost, low maintenance, and simple sewage treatment systems are needed for the domestic sewage generation from the rapidly expanding population base in Mexicali. Such facilities should include collector sewers, sewage pump stations, and one or more sewage treatment plants, as outlined in the Mexicali Facilities Plan for the Mexicali I and II systems. These systems are relatively simple to design and construct, but would require extensive capital investment, as outlined in existing reports.

Toxic wastes and other industrial wastes are best controlled by source control practices. The approaches for these programs have been developed over the past decade, in particular in the United States, and are an important feature of most pollution control programs. The theory is that it is much easier to eliminate contaminants at the source before they enter the waste stream and the environment.

Agricultural runoff represents another extremely difficult challenge because of the very large acreage involved and the intensive use of pesticides, fertilizers, etc. in both the U.S. and Mexico. Control of agricultural runoff at the sources and recycling/treatment systems also will be essential to resolve these problems.

Technological solutions to contamination of the New River will require a comprehensive approach that utilizes a wide variety of pollution control mechanisms, along with recent and future technology advances, many of which are still in developmental stages.

In summary, practical solutions to environmental and human health issues associated with the New River are challenges that will be solved best by the integration of creative, implementable technologies and financing, along with appropriate scientific, resource management, and engineering considerations.

Acknowledgments

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APPENDIX A

INTERNATIONAL BOUNDARY AND
WATER COMMISSION
MINUTE NO. 288

APPENDIX B

FACT SHEET ON BECC AND NADBANK

DUPLICATE ORIGINAL
INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

APPENDIX A

Minute No. 268

Ciudad Juarez, Chihuahua
October 30, 1992

CONCEPTUAL PLAN FOR THE LONG TERM SOLUTION
TO THE BORDER SANITATION PROBLEM OF THE NEW RIVER
AT CALEXICO, CALIFORNIA - MEXICALI, BAJA CALIFORNIA

The Commission met in the offices of the Mexican Section in Ciudad Juarez, Chihuahua at 1 p.m. on October 30, 1992, to consider a conceptual plan for the long-term solution to the New River border sanitation problem at Calexico, California - Mexicali, Baja California.

The Commissioners referred to recommendations from the IXth United States/Mexico Binational Commission meeting of September 9, 1991 chaired by United States Secretary of State James A. Baker III and Secretary of Foreign Relations of Mexico Fernando Solana. On that occasion the representatives of both Governments agreed that priority attention should be given to the clean-up of the New River and instructed the International Boundary and Water Commission to identify, in the earliest possible time, a framework for solution of the problem.

The Commissioners alluded to the recommendations in Minute No. 264 entitled, "Recommendations for Solution of the New River Border Sanitation Problem at Calexico, California/Mexicali, Baja California Norte," dated August 26, 1980, which are directed at elimination of domestic and industrial wastewater discharges in the New River at the international boundary, as well as implementation of long-term actions for final disposal of these wastewaters and their conveyance away from the international boundary.

Similarly, the Commissioners pointed out the agreement of the two Governments in Commission Minute No. 261 entitled, "Recommendations for the Solution to the Border Sanitation Problems," dated September 24, 1979, which establishes the common criteria to be considered by the Commission to provide an adequate solution to these problems.

The Commissioners made note that the New River originates approximately 22 miles (35.3 kilometers) south of the international boundary and follows a northerly course through Mexicali, B.C. After crossing the international boundary at Calexico, CA, the river channel continues past farmlands and several communities in the Imperial Valley to discharge to the Salton Sea, approximately 60 miles (96 kilometers) north of the United States/Mexico boundary.

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The Commissioners referred to the fact that the Government of Mexico has constructed rehabilitation works and expanded the sewage collection system of the City of Mexicali intended to meet the quality standards established in Minute No. 264. In this context, they agreed that the jointly financed works under Minute No. 274 entitled, "Joint Project for the Improvement of the Quality of the Waters of the New River in Calexico, California - Mexicali, Baja California," dated April 15, 1987, improved the quality of the waters in the New River at Calexico - Mexicali. These works consisted of: a) acquisition of sewer system cleaning equipment; b) rehabilitation of two pumping stations; and c) construction of a new pumping station.

The Commissioners agreed that in spite of the major effort of the Government of Mexico to rehabilitate and expand the sewage system in Mexicali, the accelerated urban growth has surpassed the coverage capacity of these works such that there are still discharges into the New River of partially treated or untreated industrial and domestic wastewaters that then cross the international boundary.

The Mexican Commissioner informed that the Secretariat of Social Development, the National Water Commission and the government of the State of Baja California had presented to the Mexican Section a number of works and measures proposed or underway. These works and measures have been reviewed in principle by Principal Engineers Conrad G. Keyes, Jr. and Luis Antonio Rascon Mendoza of the United States and Mexican Sections, respectively, who concluded that together these form a conceptual plan for the long-term solution to the New River border sanitation problem.

The Mexican Commissioner pointed out that these works and measures contemplate construction and rehabilitation of facilities to collect, treat, and dispose of the Mexicali wastewaters. In this manner, two separate sanitation systems, Mexicali I and Mexicali II, would be created in the mid-term, along with a general program of actions to eliminate the discharges into the New River of untreated or partially treated domestic and industrial wastewaters. The Mexican Commissioner described the proposed works and measures in the two referenced systems as follows:

Mexicali I Zone

The Mexicali I sanitation system consists of a sewage collection network that handles the wastewaters in two major collectors, the North Collector which discharges into Pumping

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Plant No. 2 upper sump and the South Collector which discharges into Pumping Plant No. 1. There are also three smaller collectors which function as follows: Francisco Villa Collector, which discharges to Pumping Plant No. 1A; the Left Bank Collector which discharges into the lower sump of Pumping Plant No. 2; and the Right Bank Collector, which discharges into the Braulio Maldonado Pumping Plant which lifts the sewage to Pumping Plant No. 2.

Discharges from Pumping Plant No. 2 are conveyed to Pumping Plant No. 1 by two parallel 36-inch (91 cm) diameter asbestos cement class A-5 pressure lines extending 0.57 mi (895 m). These lines then connect to a collector which conveys these waters by gravity for 1.62 mi (2,600 m) with diameters of 54 in (137 cm), 60 in (152 cm) and 72 in (183 cm) for final gravity discharge of its waters at Pumping Plant No. 1.

Pumping Plant No. 1 also receives flows from the South Collector and discharges the wastewaters in two parallel asbestos cement class A-5, 36-in (91-cm) diameter pressure lines for 3.11 mi (5,000 m) to the Mexicali stabilization lagoons located southwest of the city.

Also, Pumping Plant No. 1A discharges wastewaters to this treatment system by means of a 24-in (61 cm) diameter PVC line extending 1.45 m (2,334 m).

Finally, the Mexicali I sanitation system consists of a stabilization lagoon system that discharges into an agricultural drain, thence to the international drain which conveys the effluent by gravity to the New River at the international boundary. The referenced existing lagoon system is designed to serve a population of 376,250 and for a wastewater discharge of 22.34 million gallons per day (980 liters per second). The Mexicali I collection system coverage is shown on the location map enclosed as Figure No. 1.

The appropriate authorities in Mexico are putting into practice a specific industrial wastewater discharge control program which contemplates construction of pretreatment systems or modifications to production processes to eliminate the negative impact of these wastewaters on the waters of the New River or any other receiving body.

Further, the appropriate authorities in Mexico are developing a general sanitation program to relocate irregular human settlements and to eliminate clandestine dumping of solid wastes along the New River banks. Also, the program contemplates construction of erosion control works in specific areas

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through reforestation of lands, pavement of streets, and canalization or elimination of agricultural drains in urban areas which now operate as open wastewater drains.

In conformance with the above, the conceptual plan for the Mexicali I Zone includes the following works and measures:

- 1) Rehabilitation and replacement of sewage lines to cover the design population.
- 2) Rehabilitation of the North Collector to include works that would intercept uncontrolled discharges of wastewaters in Drain No. 134 and convey these by gravity to Pumping Station No. 2.
- 3) Rehabilitation of the New River left and right bank collectors to include an increase in capacity by replacing the present 18-in (46 cm) diameter lines with 30-in (76 cm) lines.
- 4) Acquisition of a sufficient number of sewer line system cleaning trucks, which through their operation in a continuous program permit maintenance of the sewer line conveyance efficiency.
- 5) Application and implementation of a preventative maintenance program for the sanitation system that considers availability of standby pumping equipment and necessary spare parts in components that need them.
- 6) Control untreated slaughterhouse discharges into the New River, incorporating them with prior treatment into the municipal sanitary system.
- 7) Pretreatment, in accordance with Mexican laws in force, of wastewaters generated by industries before discharge into sanitation systems or receiving bodies to include a short-term prohibition of discharges of untreated wastewaters into the New River or its tributaries by previously identified industries.
- 8) Improvement of the operation and maintenance of the lagoon treatment system located in southwest Mexicali.

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- 9) Put into effect in the earliest time possible, a program to characterize the influent into the treatment system planned in this area to identify those substances which would reduce the efficiency of the treatment system and thereby impede the goal of eliminating untreated or partially treated domestic and industrial wastewaters in the New River at the international boundary. The results of this program and that information relating to procedures that Mexican authorities can use for this purpose which can be obtained in the United States will be shared by the two Governments through the Commission.
- 10) Utilization to the maximum extent possible of the effluent from the treatment lagoon system in southwest Mexicali for irrigation of farmlands and an immediate beginning of technical and financial feasibility analyses, under Commission supervision for works that would permit for the benefit of Mexico, disposal of the effluent some distance from the international boundary. The reuse or disposal of treated wastewaters should meet water quality standards that will not endanger the health and well-being of inhabitants in the United States and Mexico in this area and thus avoid the progressive deterioration of drainage waters that flow in the channel of the New River.
- 11) Place into immediate effect plans by Mexico to relocate unregulated settlements, for erosion control works, and eliminating clandestine dumping of solid wastes along the banks of the New River or its tributaries.

The location of the works described in the above points is shown in Figure No. 2.

Mexicali II Zone

The Mexicali II sanitation system is located southeast of the central part of the city and covers an area of Mexicali's present and future urban and industrial growth. Presently, this area is served by an aerated lagoon treatment system called "Sistema de Tratamiento Gonzalez Ortega." The system's

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UNITED STATES AND MEXICO

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capacity is insufficient to serve present flows and those estimated in the immediate future. A sewage collection and final disposal system that will serve the estimated population in this area is under final design and partly under construction.

A number of industries are located in the Mexicali II system coverage area. As in the case of the Mexicali I area, the appropriate authorities in Mexico are putting into practice a specific industrial discharge controls program which contemplates construction of pretreatment systems or modifications to production processes to eliminate the negative impact of the discharge of these wastewaters on the waters of the New River and Alamo River, which also flows northwards across the boundary and is located in an area of future urban growth which covers construction of a new port of entry 6.9 mi (11 km) east of the existing port of entry at Calexico and Mexicali.

At the same time, the Mexicali II system contemplates canalization or elimination of agricultural drains in urban areas which now operate as open wastewater drains.

The Mexicali II Zone covers an area shown on Figure No. 3.

In furtherance of the above, the conceptual plan for this area includes the following works and measures:

- 1) Rehabilitation and installation of sewage lines to serve the design population.
- 2) Acquisition of a sufficient number of sewer line system cleaning trucks, which through their operation in a continuous program, permit maintenance of sewer line conveyance efficiency.
- 3) Elimination of all discharges of untreated wastewaters that could flow into the Alamo River by incorporating them into the Mexicali II sanitation system.
- 4) Installation of gravity collectors to replace open air agricultural drains and construct pumping stations to convey domestic and industrial wastewaters for treatment in the new treatment system, giving the first priority to the Mexicali Drain.
- 5) Application and implementation of a comprehensive preventative maintenance program for the

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sanitation system that considers availability of standby pumping equipment and necessary spare parts in components that need them.

- 6) Construction of a new treatment system which will provide service to the Mexicali II sanitation system and permit reuse of its effluent. The planning of this treatment system contemplates financing mechanisms necessary to implement a comprehensive construction, operation and maintenance program for these facilities.
- 7) Immediate initiation of technical and financial feasibility analyses for works that would permit, for the benefit of Mexico, reuse or final disposal of the effluent from the treatment system and eventual disposal away from the international boundary of that effluent that cannot be reused. The reuse or disposal of those treated wastewaters shall be such that they do not endanger the health and well-being of inhabitants of the United States and Mexico and in that area and thus avoid the progressive deterioration of the drainage waters that flow in the channel of New River.
- 8) Pretreatment, in accordance with Mexican laws in force, of wastewaters generated by industries before discharge into the sanitation system or receiving bodies, to include a short-term prohibition of discharges of untreated wastes to the New River or its tributaries from previously identified industries.
- 9) Put into effect in the earliest time possible, a program to characterize the influent into the treatment system planned for this area to identify those substances which would reduce the efficiency of the treatment system and thereby impede the goal of eliminating untreated or partially treated domestic and industrial wastewaters in the New River at the international boundary. The results of this program and that information relating to procedures that Mexican authorities can use for this purpose that can be obtained in the United States shall be shared by the two Governments through the Commission.

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UNITED STATES AND MEXICO

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The location of the works described in the above points is shown in Figure No. 4.

The Commissioners considered that if the actions and works proposed for the Mexicali I and the Mexicali II systems are carried out within approximately five years in the above-described manner, discharges of untreated or partially treated domestic and industrial wastewaters to waters of the New River will be eliminated. At the same time, the Commissioners made note that the responsible authorities of the Government of Mexico require at least six months from the day that this Minute is approved by the two Governments to be able to conclude necessary internal arrangements to determine the sources of financing which could include funds from Mexican private enterprise in order to develop the specific plans and work schedules that will be presented to this Commission for approval in a signed Minute that will include a work schedule for execution of the components of the conceptual plan described above. The Commissioners also noted the information of the U.S. Commissioner that his Government is willing to participate financially in components of the conceptual plan since improvements of the water quality of the New River to levels acceptable to the United States and Mexico is in the interest of both countries.

The Commissioners concluded that regardless of the source of financing, the works planned for the Mexicali I and Mexicali II systems should be designed, constructed, operated, and maintained in a manner that will ensure that no untreated domestic and industrial wastewaters are discharged into the New River or its tributaries and that the effluent from treatment facilities in Mexico have a quality such that the waters of the New River at the international boundary meet the standards that are agreed to by the two Governments in a Commission Minute.

Based on the above considerations, the Commissioners agreed to submit the following recommendations for the approval of the two Governments:

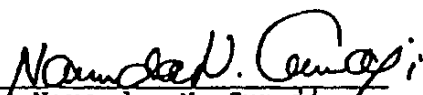
1. The conceptual plan in this Minute shall be approved as the long-term solution to the border sanitation problem of the New River at Calexico, California - Mexicali, Baja California.

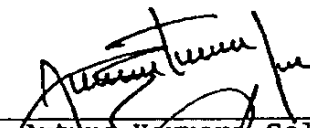
INTERNATIONAL BOUNDARY AND WATER COMMISSION
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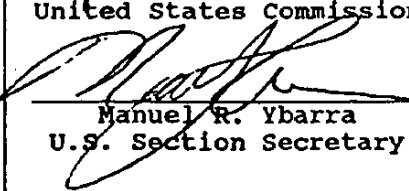
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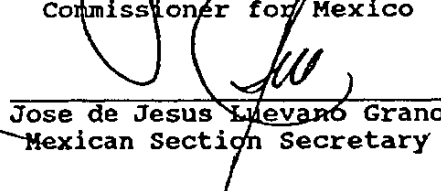
2. In a period of approximately six months from the date that the two Governments approve this Minute, there be presented to the Commission the plans for components of the conceptual plan referenced in this Minute that incorporates the criteria of the two Governments that the works should be designed, constructed, operated, and maintained in a manner that will ensure that no untreated domestic and industrial wastewaters are discharged into the New River or its tributaries and that the effluent from treatment facilities in Mexico have a quality such that the waters of the New River at the international boundary meet standards agreed to by the two Governments in a Commission Minute.
3. The Commission, within 90 days from the date of approval by the Commissioners of the plans referred in Recommendation 2 of this Minute, conclude a new Minute recommending to both Governments the specific projects and schedules of works, and actions contemplated in the conceptual plan, including financing sources. In case that the course of action recommended by the Commission provides that the problem be jointly corrected by both Governments, this matter will be handled in accordance with Minute No. 261.
4. In accordance with Articles 2, 20, 24, and 25 of the 1944 Water Treaty, the design, construction, operation, and maintenance of the treatment plants and major collectors be considered as works constructed and used in fulfillment of the provisions of this treaty and are, therefore, under the supervision of the Commission, and under the jurisdiction of the Mexican Section.

The meeting adjourned.


Narendra N. Gunaji
United States Commissioner


J. Arturo Herrera Solís
Commissioner for Mexico


Manuel R. Ybarra
U.S. Section Secretary


Jose de Jesus Luevano Grano
Mexican Section Secretary

NORTH AMERICAN DEVELOPMENT BANK

Fact Sheet

FOR MORE INFORMATION CONTACT:	Victor Miramontes	231-8000
	NADBank	
	Lily B. Montealegre	805-0608
	MB&A Communications	

Passage for the North American Free Trade Agreement by the U.S. and Mexico included the creation of two U.S.-Mexico international institutions to handle border issues.

- The Border Environmental Cooperation Commission in Ciudad Juarez, Chihuahua, Mexico, which will work with states and communities in resolving environmental problems in the border region. The commission's first priorities include projects relating to potable water supplies, waste water treatment and solid waste.
- The North American Development Bank, based in San Antonio, Texas, serves as the financing entity for projects certified by the commission.
- The agency currently is located at 425 Soledad, Suite 610, San Antonio, Texas, 78205. The telephone number is (210) 231-8000. Facsimile transmissions should be directed to (210) 231-6232. Permanent headquarters will be located in Hemisfair Park, with construction to begin in the summer of 1995 and completion scheduled for mid 1996.
- The bank is run by a six-member board of directors, including: Treasury Secretary Robert Rubin, Secretary of State Warren Christopher and Carol Browner, administrator of the Environmental Protection Agency for the United States; and Finance Minister Guillermo Ortiz, Trade and Industry Minister Herminio Blanco and Carlos Rojas, secretary of social development for Mexico.
- NADBank's manager and chief executive officer is Lic. Alfredo Phillips Olmedo, who was named by the Board of Directors to the post on Jan. 30, 1995. Victor Miramontes was named deputy manager and chief operating officer on October 28, 1994, by the Board.

425 SOLEDAD • SUITE 610 • SAN ANTONIO, TX. • 78205-1506

TELEPHONE (210) 231-8000 • FAX (210) 231-6232

NADBank FACT SHEET/P.2

- Financial commitments from the United States and Mexico total \$225 million in paid-in capital during the next four years and the two countries will make available about \$3 billion in callable capital.
- The U.S. Treasury estimates that the NADBank will generate between \$2 billion and \$3 billion in loans and guarantees during the next 10 years. NADBank officials expect to draw upon other sources of financing including existing state and local programs, the World Bank, the IDB and private capital.
- The NADBank also will provide financial expertise to the Border Environmental Cooperation Commission and government agencies involved in individual projects. The agency does not provide grants.
- The bank has an ancillary function, providing financing for community adjustment and investment outside the border region. This activity will use 10 percent of the paid-in capital contribution of both parties. In the United States, the program will be allied with existing federal credit programs like the loan guarantee program of the Small Business Administration.

APPENDIX C

Explanation of Priority Ranking System and Data Analysis

Appendices D, E, and F present detailed analyses of priority ranking data derived from the ranking sheets (Appendix K) that were completed by each participant as the final phase of the workshop. These appendices contain three types of information, in addition to the title of the problem.

First, the numerator of the fraction in the first column (i.e., Times Picked/Pts.) is the number of times which that problem was selected by the participants from the group, or subgroup, identified at the top of the page.

The second piece of information, the denominator of the fraction, is the total number of points the issue received based on a number one (highest) rank being given ten points, a number two rank nine points, and so on down to the tenth ranked issue being given one point. All other issues not selected received zero points.

The third item of information in the three following appendices is given in the column titled Strength of Feeling. This is simply the percentage obtained by dividing the total number of points received by the total number of points which the issue could have been given if everyone had selected that issue as their first priority. Since there were 30 participants, the denominator in Appendix D (All Participants) is 300. If every participant awarded a particular issue their highest rank, (i.e., a one), then the Strength of Feeling would be 100 % (i.e., $30 \times 10 = 300$, then $300/300 \times 100 = 100\%$). If all rankers selected another issue as their second highest priority, its Strength of Feeling would be 90 %. If no one selected a particular issue, its Strength of Feeling would be 0 %.

As an example, the highest ranking issue selected by all participants (shown in Appendix D) received 243 points. Thus, the Strength of Feeling is computed as $243/300 \times 100 = 81\%$. This is a very strong consensus for the group to express.

APPENDIX D

All Problems (18) Ranked by All Participants (30)

RANK	TITLE	TIMES PICKED/ PTS.	STRENGTH OF FEELING
1.	How to Finance Water Quality Infrastructure	30/243	81.0 %
2.	Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality	23/175	58.3 %
3.	The Parties Have Not Agreed on a Facilities Plan	23/142	47.3 %
4.	Need for Information on Future Value of Clean Water in This Area	20/118	39.3 %
5.	Establish a Bi-national Framework to Document Past, Present, and Future Environmental and Human Health-related Conditions, Including Source Contaminant Characterization, Industrial Pre-treatment, etc.	18/111	37.0 %
6.	Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects	21/107	35.7 %
7.	Very Little Concern on the Part of the Public Regarding the Solutions of the New River	22/105	35.0 %
8.	International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs	22/98	32.7 %
9.	The Lack of a Lead Local/International Agency with a Stake in the Clean-up of the New River	17/93	31.0 %
10.	The American Section of Responses to the Mexican Presentation at the CILA-IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination	12/83	27.7 %
11.	The Need for Cooperation of Those Persons Using and Associated with the New River	15/77	25.6 %
12.	Using the New River as a Case Study, Examine how Institutional Constraints Presently Affect the Solution of Transboundary Resource Problems	17/75	25.0 %
13.	Need to Specify Water Rights If We Are to Connect Financing Solutions to Market-based Approaches	10/53	17.6 %
14.	Overcome Legal Impediments Innovatively	12/46	15.3 %
15.	Asymmetry in Conditions on Each Side of the Border	8/38	12.7 %
16.	There is a Lack of Intent and of Clarity in the Solution of the Problem	10/31	10.3 %
17.	Anaerobic Conditions and Pathogenic Organisms in the New River as it Enters the U.S. at Calexico	6/22	7.3 %
18.	U.S. Agricultural Runoff Water Quality Addressed and Managed Under Imperial Irrigation District Drainage Master Plan (Provide Information to Mexico)	7/12	4.0 %

APPENDIX E

All Problems (18) Ranked by United States Participants (24)

RANK	TITLE	TIMES PICKED/ PTS.	STRENGTH OF FEELING
1.	How to Finance Water Quality Infrastructure	24/192	80.0 %
2.	Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality	18/143	59.6 %
3.	The Parties Have Not Agreed on a Facilities Plan	20/119	47.8 %
4.	Need for Information on Future Value of Clean Water in This Area	18/107	44.6 %
5.	Establish a Bi-national Framework to Document Past, Present, and Future Environmental and Human Health-related Conditions, Including Source Contaminant Characterization, Industrial Pre-treatment, etc.	17/106	44.2 %
6.	Very Little Concern on the Part of the Public Regarding the Solutions of the New River	18/87	36.2 %
7.	The Lack of a Lead Local/International Agency with a Stake in the Clean-up of the New River	16/84	35.0 %
8.	International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs	19/77	32.1 %
9.	Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects	16/72	30.0 %
10.	The Need for Cooperation of Those Persons Using and Associated with the New River	12/70	29.2 %
11.	Using the New River as a Case Study, Examine how Institutional Constraints Presently Affect the Solution of Transboundary Resource Problems	15/64	26.7 %
12.	Need to Specify Water Rights If We Are to Connect Financing Solutions to Market-based Approaches	9/47	19.6 %
13.	Overcome Legal Impediments Innovatively	10/41	17.1 %
14.	The American Section of Responses to the Mexican Presentation at the CILA-IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination	6/37	15.7 %
15.	Asymmetry in Conditions on Each Side of the Border	6/28	11.7 %
16.	Anaerobic Conditions and Pathogenic Organisms in the New River as it Enters the U.S. at Calexico	5/21	8.7 %
17.	There is a Lack of Intent and of Clarity in the Solution of the Problem	5/16	6.7 %
18.	U.S. Agricultural Runoff Water Quality Addressed and Managed Under Imperial Irrigation District Drainage Master Plan (Provide Information to Mexico)	5/9	3.7 %

APPENDIX F

All Problems (18) Ranked by Mexico Participants (6)

RANK	TITLE	TIMES PICKED/ PTS.	STRENGTH OF FEELING
1.	How to Finance Water Quality Infrastructure	6/51	85.0 %
2.	The American Section of Responses to the Mexican Presentation at the CILA-IBWC Meeting in March '95 Presents the Entire Problem for the Solution of the Contamination	6/46	76.7 %
3.	Lack of Revenues Among Responsible Agencies to Support the Staff Needed to Develop New River Pollution Abatement Projects	5/35	58.3 %
4.	Take Advantage of the Historic Coming Together of Positive Developments to Move the Project from Idea to Reality	5/32	53.3 %
5.	The Parties Have Not Agreed on a Facilities Plan	3/23	38.3 %
6.	International Commitments Made Prior to Obtaining Public Support or a Thorough Identification of the Problems, Solutions, and Costs	3/21	35.0 %
7.	Very Little Concern on the Part of the Public Regarding the Solutions of the New River	4/18	30.0 %
8.	There is a Lack of Intent and of Clarity in the Solution of the Problem	5/15	25.0 %
9.	Need for Information on Future Value of Clean Water in This Area	2/11	18.3 %
10.	Using the New River as a Case Study, Examine how Institutional Constraints Presently Affect the Solution of Transboundary Resource Problems	2/11	18.3 %
11.	Asymmetry in Conditions on Each Side of the Border	2/10	16.7 %
12.	The Lack of a Lead Local/International Agency with a Stake in the Clean-up of the New River	1/9	15.0 %
13.	The Need for Cooperation of Those Persons Using and Associated with the New River	3/7	11.7 %
14.	Need to Specify Water Rights If We Are to Connect Financing Solutions to Market-based Approaches	1/6	10.0 %
15.	Overcome Legal Impediments Innovatively	2/5	8.3 %
16.	Establish a Bi-national Framework to Document Past, Present, and Future Environmental and Human Health-related Conditions, Including Source Contaminant Characterization, Industrial Pre-treatment, etc.	1/5	8.3 %
17.	U.S. Agricultural Runoff Water Quality Addressed and Managed Under Imperial Irrigation District Drainage Master Plan (Provide Information to Mexico)	2/3	5.0 %
18.	Anaerobic Conditions and Pathogenic Organisms in the New River as it Enters the U.S. at Calexico	1/1	1.7 %



Letter of Invitation

NWRI

National Water Research Institute

10500 Ellis Avenue, P.O. Box 20865, Fountain Valley, CA 92728-0865

(714) 378-3278 Fax (714) 378-3375

Ronald B. Linsky
Executive Director

Board of Directors
Orange County Water District
Langdon W. Owen

Irvine Ranch Water District
Peer A. Swan

County Sanitation Districts
of Orange County
A. B. "Buck" Cailin

Municipal Water District
of Orange County
William F. Davenport

San Juan Basin Authority
John V. Foley

April 12, 1995

Participant
Address
City, State

Dear Participant:

Increasing attention to transboundary pollution issues has been heightened by the passage of the North American Free Trade Agreement (NAFTA) and its supplemental environmental agreements. No where is this more evident than the issues associated with the New River between the Imperial Valley of California and the City of Mexicali, Baja California.

In an attempt to develop a bi-national approach to the issues of the New River, the National Water Research Institute cordially invites you to attend and participate in a New River Workshop on May 19-21, 1995, at the Barbara Worth Resort, El Centro, California.

The purpose of this workshop will be to address the question: *What are the most significant technical, economic and policy issues impeding improvements in water quality of the New River?* In search of acceptable answers to this question, NWRI is inviting a group (35) of qualified people representing both the public and private sectors to identify and prioritize critical issues in order to bring about an orderly and coordinated approach to the New River problems.

NWRI will serve as the facilitator utilizing the Nominal Group Technique, a consensus building process, for the workshop.

The participants will convene on Friday, May 19, 1995, at the Barbara Worth Resort in El Centro, California. The evening's agenda includes registration, reception, dinner and workshop orientation. The workshop will be conducted with simultaneous translation. The intensive session of the workshop will begin at 8:00 a.m. on Saturday, May 20, 1995, and be completed by 5:00 p.m. Sunday, May 21, 1995, will be an open day for follow-up discussion sessions. A bi-lingual workshop report will be provided to all participants shortly after the workshop is completed.

The NWRI will underwrite all travel costs and expenses associated with your participation in this workshop.

To register for the workshop, please complete the enclosed Invitation to Participate form and mail or FAX to NWRI no later than May 1, 1995. Also, please return the one page summary of your interest and experiences. We plan to distribute these summaries to participants with other materials prior to the workshop.

I sincerely hope you will join with us in this very important endeavor.

Sincerely,

NATIONAL WATER RESEARCH INSTITUTE

Ronald B. Linsky
Executive Director

Enclosure

Letter of Confirmation

NWRI

National Water Research Institute

10500 Ellis Avenue, P.O. Box 20865, Fountain Valley, CA 92728-0865

(714) 378-3278 Fax (714) 378-3375

Ronald B. Linaky
Executive Director

Board of Directors
Orange County Water District
Langdon W. Oaten

Irvine Ranch Water District
Peer A. Swan

County Sanitation Districts
of Orange County
A. B. "Buck" Catlin

Municipal Water District
of Orange County
William F. Davenport

San Juan Basin Authority
John V. Foley

May 3, 1995

Participant
Address
City, State

Dear Participant:

Thank you for accepting our invitation to participate in the NWRI Nominal Group Technique workshop on *"What are the most significant technical, economic and policy issues impeding improvements in water quality of the New River?"*

The participants will convene on Friday, May 19, 1995 at the Barbara Worth Country Club in El Centro, 2050 Country Club Drive, Holtville, California. The evenings agenda includes registration, reception, dinner and workshop orientation. The workshop will be conducted with simultaneous translation. The intensive session of the workshop will begin at 8:00 a.m. on Saturday, May 20, 1995 and be completed by 5:00 p.m. On Sunday, May 21 from 8:00 a.m. until noon the workshop will be devoted to developing an Action Plan. A bi-lingual workshop report will be provided to all participants shortly after the workshop is completed.

The NWRI will underwrite all travel costs including hotel, air fare, mileage and expenses associated with this workshop. Hotel accommodations have been arranged. Travel reimbursement forms will be provided upon your arrival. Please submit your Hotel and Meals Arrangement Form no later than May 11, 1995.

This folder contains information which will help you to be a more effective workshop participant. Please allow yourself at least two hours to review this material and to prepare for the workshop before arriving. The Background Paper may be especially interesting. It is important that you attend the entire workshop (Saturday and Sunday) and do not depart before it is finished.

Please read the workshop Guidelines and Procedures we plan to follow during the workshop. We need to adhere to these so that we can complete our work before adjournment time. Of particular importance is the Issue Identification Form. Please prepare a full write-up on each topic which you plan to propose. You may propose as many topics as you wish.

If you have not forwarded your resume or personal experience summary, please do so as soon as possible.

We are looking forward to your participation at the workshop and to producing a useful report on the results of your efforts. Thank you again for accepting the invitation to participate in this workshop.

Should you have any questions prior to the workshop, please do not hesitate to contact me at (714) 378-3278.

Sincerely,

NATIONAL WATER RESEARCH INSTITUTE

Ronald B. Linsky
Executive Director

Enclosures

Workshop Guidelines and Procedures

NEW RIVER WORKSHOP

GUIDELINES AND PROCEDURES

The workshop will be conducted employing the Nominal Group Technique to ensure that; (1) each participant's time and talents are used effectively, and (2) a useful report will result. Please observe the following guidelines:

- ◆ The workshop will begin at 6:00 p.m. on Friday, May 19th in the Imperial Room and will conclude at 1:00 p.m. on Sunday, May 21, 1995.
- ◆ If you cannot stay for the entire workshop, please do not attend.
- ◆ Come prepared with each of your proposals written up on an Issue Identification Form. You will be free to modify, improve or add to your write-ups as the workshop progresses.
- ◆ The workshop will consist of four distinct parts:
 1. **Issue Identification.** Each individual will be asked in turn to identify for the group his/her highest priority issues. Three to five minutes of uninterrupted time will be allotted to describe its importance, the objective of the research or development project, and the hypothesis or suggested approach. Discussion will be limited to questions of clarification. The title will be written in large letter on paper, numbered, originator noted, and posted on the wall. This process will continue until all topics are identified.
 2. **Consolidation.** All proposed issues will be reviewed. When agreed upon by consensus, those with similar themes will be consolidated. An ad hoc working group will be formed to generate a substitute statement which incorporates the concepts embodied in those being subsumed.
 3. **Priority Ranking.** Each individual will be asked to rank in priority order his or her top 10 issues. Each ranking sheet must be signed.
 4. **Text Approval.** As the last step in the workshop, each participant will be asked to proofread and approve his or her final text. The workshop results will be published and distributed to the participants shortly after the close of the workshop.

Final Agenda

NATIONAL WATER RESEARCH INSTITUTE

The New River NGT Workshop

May 19-21, 1995

Barbara Worth Country Club
Holtville, California

FINAL AGENDA

FRIDAY, MAY 19, 1995

5:00	P.M.	Registration	Foyer
6:00	P.M.	Reception and Dinner	Imperial Room
8:00	P.M.	Workshop Orientation	
9:00	P.M.	Individual Preparation	

SATURDAY, MAY 20, 1995

7:00	A.M.	Breakfast	Dining Room
8:00	A.M.	Session I - "Issue Identification"	Imperial Room
12:00	P.M.	Lunch	Dining Room
1:00	P.M.	Session II - "Consolidation"	Imperial Room
4:00	P.M.	Session III - "Priority Ranking"	
4:30	P.M.	Session IV - "Text Approval"	
6:00	P.M.	Reception/Dinner	Patio

FINAL AGENDA (con't)

SUNDAY, MAY 21, 1995

7:00	A.M.	Breakfast	Dining Room
8:00	A.M.	Introduction to Action Planning or... "Now That We Have Identified and Ranked the Issues, What Do We Do Next?"	Imperial Room
8:30	A.M.	Data and Information Needs	Imperial Room
8:45	A.M.	Discussion	
9:00	A.M.	Water Treatment Technology 1995	
9:15	A.M.	Discussion	
9:30	A.M.	Financial Considerations	
9:45	A.M.	Discussion	
10:00	A.M.	Break	
10:30	A.M.	The Action Planning Process	
		▶ The Working Groups	
		▶ Communication Networks	
11:30	A.M.	The Action Planning Calendar	
12:00	P.M.	Lunch	Dining Room
1:00	P.M.	Wrap-Up and Adjournment	Imperial Room

Issue Identification Form

NEW RIVER WORKSHOP _____

ISSUE IDENTIFICATION FORM

(Please Print or Type)

Name: _____

Workshop question: *"What are the most significant technical, economic and policy issues impeding improvements in water quality of the New River?"*

Limit to space provided below and to a three-minute presentation at the workshop.

Issue Title: (20 words maximum)

Importance: (What is your rationale? Why is solving this issue important?)

Objective: (Define clearly so that a useful result can be obtained)

Suggested Approach: (How would you attack this issue?)

Consolidation Worksheet

NEW RIVER WORKSHOP _____

CONSOLIDATION WORKSHEET

Your Issue # _____

Other Issues which could be consolidated with this one:

_____ Originator _____

_____ Originator _____

Issue Ranking Sheet

NEW RIVER WORKSHOP _____

ISSUE RANKING SHEET

(1 = Highest to 10 = Lowest)

<u>Your Issue Rank</u>	<u>Issue Number</u>
1	_____
2	_____
3	_____
4	_____
5	_____
6	_____
7	_____
8	_____
9	_____
10	_____

Name (Please Print): _____

Signature: _____



