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California - Baja California Border Environmental Infrastructure Needs Assessment

July 2004



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AGUA LIMPIA





STATE OF CALIFORNIA

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Terry Tamminen
California Co-Chair

Enrique Villegas Ibarra
Baja California Co-Chair



TERRY TAMMINEN

MESSAGE FROM THE SECRETARY

Dear Reader,

The year 2004 marks the tenth anniversary of the North American Free Trade Agreement (NAFTA), and with its implementation, we have seen significant economic growth in the US-Mexico border region. This growth has made the region prosper economically and has made it a top competitor in the global economy. While this economic growth has proven to be beneficial, it has also created a serious challenge for border communities in addressing environmental degradation and its impacts.

Since the inception of NAFTA, California has been a leader in pursuing adequate environmental infrastructure commensurate with the increasing population growth. This has been a top priority in an effort to achieve clean air, clean water, effective waste management and protection of the public health and our natural resources. In cooperation with our Baja California neighbors, we aim to continue striving towards these goals and ensure that our shared environmental needs are adequately addressed and work collaboratively towards a cleaner shared border.

I take great pleasure in presenting you the third edition of the California-Baja California Environmental Infrastructure Needs Assessment report and look to continue moving forward in obtaining the California-Baja California region its fair share of monies to improve and construct needed environmental infrastructure.

Sincerely,

Terry Tamminen
Secretary
California Environmental Protection Agency



ENRIQUE VILLEGAS IBARRA

MENSAJE DEL DIRECTOR GENERAL DE ECOLOGÍA DEL ESTADO DE BAJA CALIFORNIA

Estimado Lector,

La protección ambiental en nuestra dinámica región fronteriza, además de una estrecha coordinación y cooperación binacional, requiere de infraestructura que asista a las comunidades de ambos lados de la frontera en la atención de sus principales retos ambientales. Con este fin y conjugando esfuerzos de diversos ordenes de gobierno, sectores de la sociedad organizada y sector académico, se genera este Diagnóstico de Necesidades de Infraestructura Ambiental para nuestra región fronteriza, mismo que ahora orgullosamente presentamos a nombre de todos los que buscamos con nuestro quehacer cotidiano la compatibilidad del desarrollo con los principios de sustentabilidad.

Baja California y California, capitalizando oportunidades, han mantenido el liderazgo del desarrollo económico en la frontera México – Estados Unidos, a ello se ha asociado un acelerado crecimiento demográfico y fuertes presiones sobre los recursos naturales. Este imponente escenario vuelve imprescindible una visión conjunta que permita definir el rumbo y los objetivos que deben guiar la gestión ambiental en nuestra región fronteriza. El presente documento representa un paso firme en esta trascendente tarea.

Atentamente,

Enrique Villegas Ibarra
Director General
Dirección General de Ecología
del Estado de Baja California

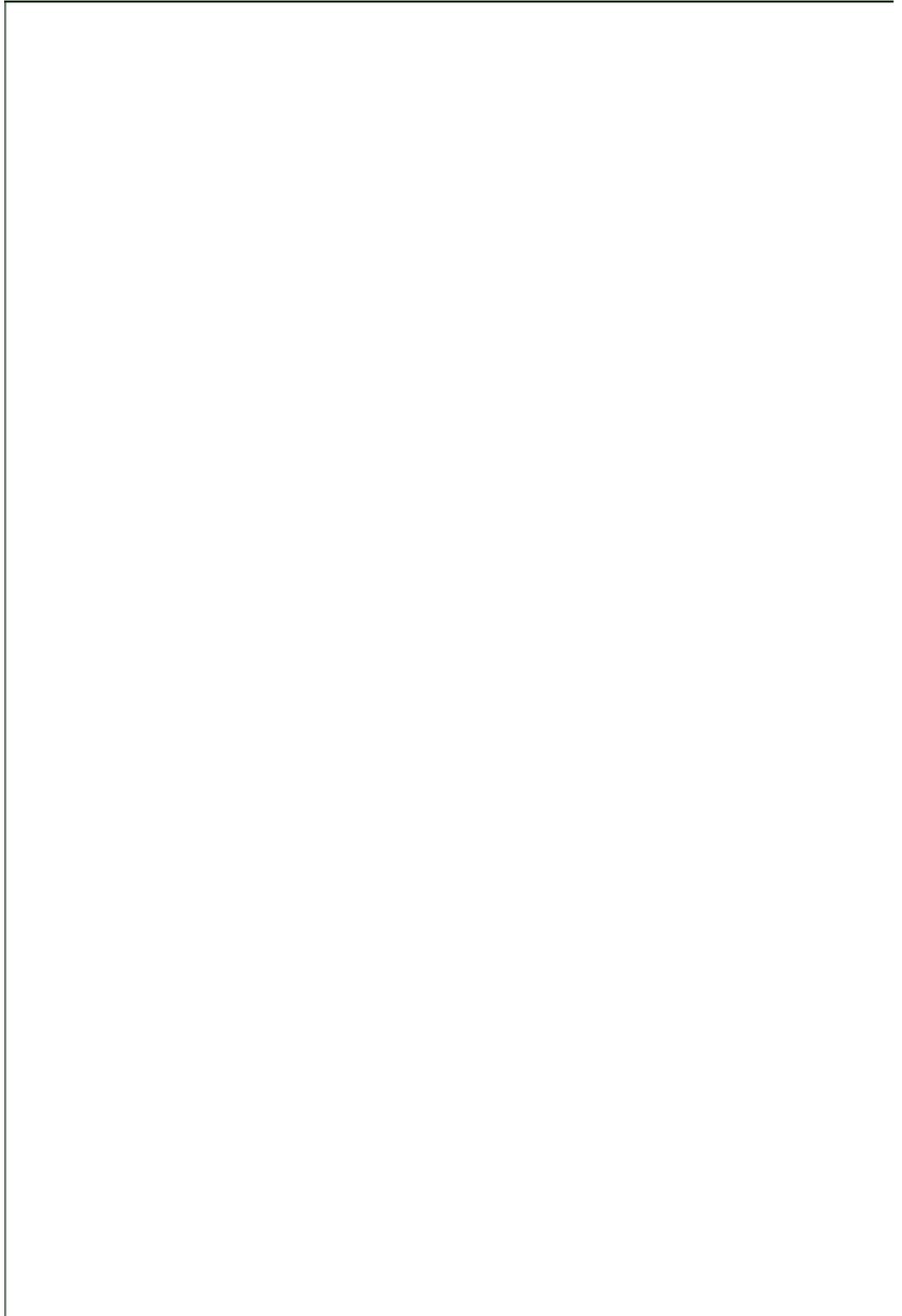


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INTRODUCTION



TIJUANA, B.C. NEAR US-MEXICO BORDER.



BORDER FIELD STATE PARK, SAN YSIDRO, CA.

Introduction & Summary of Project Submittals

BACKGROUND

Since the 1940s, the US-Mexico border region has been experiencing significant economic expansion and high population growth rates. This growth was accelerated with the passage of the North American Free Trade Agreement (NAFTA) in 1994, and today, border communities face scarce natural resources, significant environmental degradation and a lack of basic environmental infrastructure.

To offset the environmental impact of NAFTA, the United States and Mexican federal governments created the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADB) to develop, certify and fund environmental infrastructure projects along the US-Mexico border. Over the past 10 years, the BECC and the NADB have provided technical and construction assistance to border communities.

The California-Baja California border region, which includes Imperial and San Diego counties and the municipios of Tijuana, Playas de Rosarito, Tecate, Mexicali and Ensenada, accounts for approximately 46%¹ of the US-Mexico border population. To date, the California-Baja California border region has received approximately \$2.7 million in Technical Assistance and close to \$140 million in construction assistance² from the BECC and NADB.

In an effort to strategically position the California-Baja California border region for maximum funding from state, federal and binational funding institutions, both States joined forces to identify and seek funding for the development and implementation of much needed environmental infrastructure projects in the region.

PURPOSE OF THIS REPORT

In April of 1995 and 1998, California and Baja California jointly published two environmental infrastructure needs assessment reports, which identified needs and potential projects for the region. This report is a continuation of past efforts to highlight potential environmental infrastructure projects within our region. The report identifies new environmental and public health needs and projects 100 km north and 300 km³ south of the border. The majority of the environmental infrastructure projects identified within the report fall within the BECC/NADB core and new sectors, which include **water supply, wastewater treatment, municipal solid waste⁴**, air quality improvement, industrial and hazardous waste, public transportation, clean and efficient energy, municipal planning and development, and water management. The report also provides an update of potential funding sources and technical assistance available from state and federal funding agencies and non-profit border organizations within the region.

As in past editions of this report, no attempt was made to prioritize or establish rating criteria. All projects submitted by April 2004 are included.

SUMMARY OF PROJECT PROPOSALS

Over 200 letters and questionnaires were mailed to California and Baja California border and tribal communities including local, state and federal governments soliciting input on potential environmental infrastructure projects within the region. In addition, outreach efforts were initiated during the summer of 2003 to assist communities in the identification of potential projects and completion of questionnaires. As of April 2004, 51 project proposals were received. A total of 35 project proposals benefiting 25 border communities and one tribal nation in California are highlighted in the report. In addition, 16 projects were submitted benefiting four border cities in Baja California.

The total cost of projects in California is approximately US\$152.8 Million. The estimated cost of projects in Baja California is \$496 Million pesos (US\$49.6 Million). These estimates include costs for the studies needed to develop a particular project and construction. For several projects, the construction cost estimates were not available since this information cannot be determined until the appropriate feasibility studies are completed.

A summary of projects submitted by project type and location is shown in Figure 1: Border Environmental Infrastructure Projects Ca-Baja CA 2004. A list of the CA-Baja CA border communities, which can benefit from the proposed projects, is shown in Tables 1 and 2 below.

Table 1: List of California border communities that can benefit from proposed projects

Community	Population ⁵	Average Median Household Income ⁶
Brawley County Water District Colonia	2,465 ⁷	\$18,900 ⁸
City of Brawley	22,052	\$31,277
City of Calexico	27,109	\$28,929
City of Calipatria	7,289	\$30,962
Community of Campo	1642 ⁹	\$54,800 ¹⁰
Community of Descanso	880 ¹¹	\$55,000 ¹²
Community of Desert Shores	792	\$24,712
County of Imperial	142,361	\$31,870
City of Imperial	7,560	\$49,451
Community of Jacumba	500	\$14,000
Community of Jamul	5,920	\$87,309
Mesa Verde Colonia	994	\$20,625
Niland Colonia	1143	\$25,592
North Shore Colonia	3873	\$24,625
Bombay Beach Colonia	366	\$17,708
Community of Hot Mineral Spa	658 ¹³	\$23,490 ¹⁴
Oasis Colonia	2006	\$27,055
Ocotillo Colonia	296	\$23,438
Pala Band of Mission Indians	1,573 ¹⁵	\$1,100 ¹⁶
Palo Verde Colonia	236	\$12,772
Poe Colonia	126 ¹⁷	\$25,496 ¹⁸
Community of Salton City	978	\$21,563
Community of Salton Sea Beach	392	\$13,664
Tecate Colonia	150	NA
Winterhaven Colonia	529	\$11,563
City of Westmorland	2131	\$23,365

Table 2: List of Baja CA border communities that can benefit from proposed projects

Community	Population ²¹
Ensenada	370,730
Mexicali	764,602
Playas de Rosarito	63,420
Tijuana	1,210,820

As of 2000, 908,562 people were employed in the State of Baja California. Of this total, 48.7% earn between \$22,437 pesos (US \$2,244) and \$56,098 pesos (US \$5,098) annually.²²

¹ Percentage was calculated utilizing data obtained from the US Census Bureau, US Census 2000 and the Instituto Nacional de Estadística, Geografía e Informática (INEGI), XII Censo General de Población y Vivienda 2000. The estimated US-Mexico border population is 11.8 Million (Border 2012: US-Mexico Environmental Program, EPA-160-R-03-001).

² Data obtained from the BECC December 2003 Project List Table: "Financing Status of BECC-Certified Projects".

³ Please note that Border Environmental Infrastructure Fund (BEIF) grant monies are only available for water and wastewater projects within 100km of the border.

⁴ BECC/NADB Core sectors are highlighted in bold.

^{5,6} Data obtained from 2000 US Census unless otherwise indicated

^{7, 17, 18} Estimates from the Imperial County Community & Economic Development (ICCED). According to an informational query performed by the ICCED 100% of Poe Colonia's households have an annual income of 80% of the Imperial County average.

⁸ Survey performed by the City of Brawley

^{9, 10} US Department of Housing & Urban Development (HUD), Census Tract+211 and Block Group #2; median income shown is for a family of four.

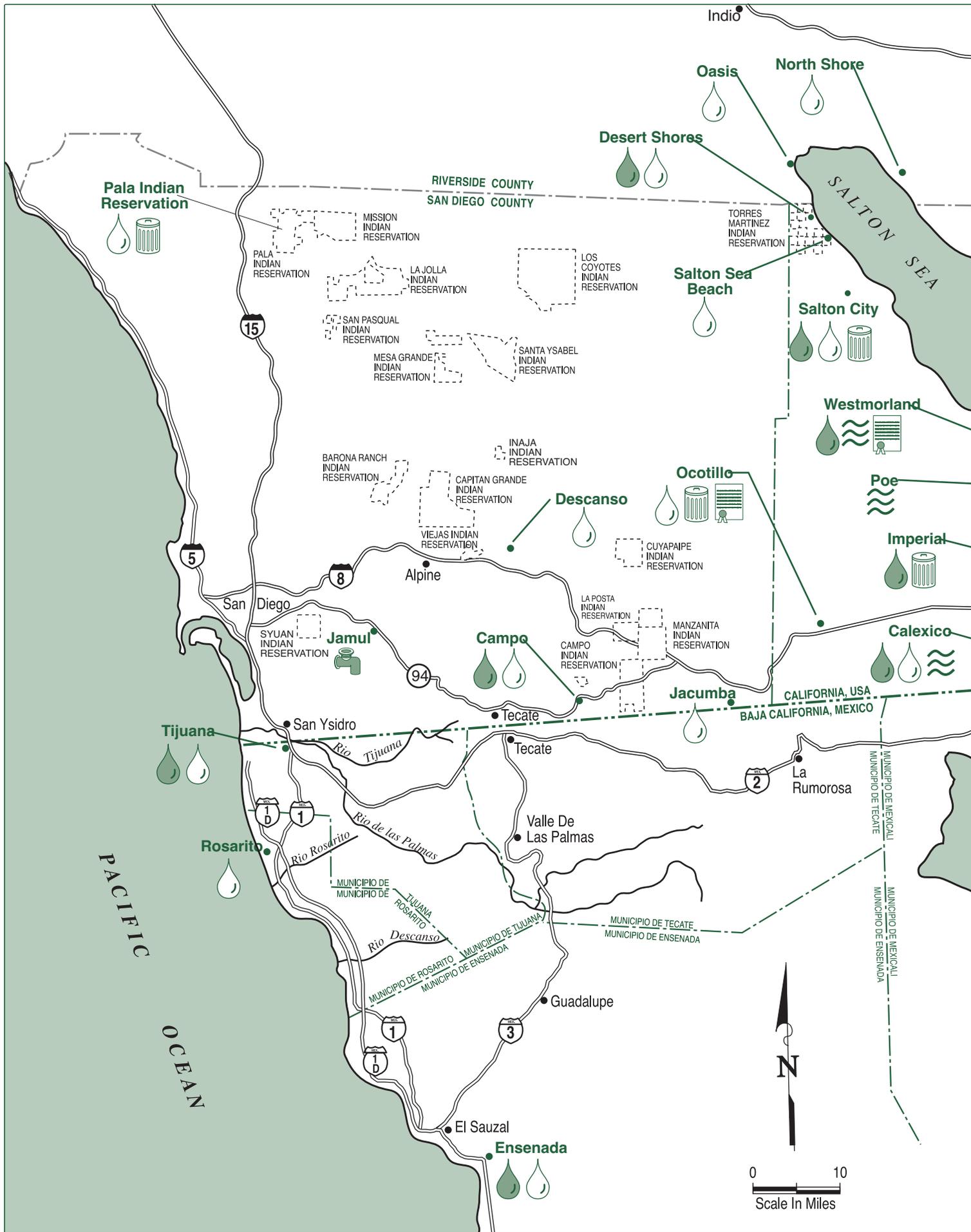
^{11, 12} Estimate obtained from the Descanso Water District

^{13, 14} Imperial County Community and Economic Development Median Income for Census Tract 124, Block Group #1 is given.

^{15, 16} Pala EPA estimate

^{21, 22} Estimates obtained from the Instituto Nacional de Estadística, Geografía e Informática (INEGI), XII Censo General de Población y Vivienda 2000.

FIGURE 1
BORDER ENVIROMENTAL
INFRASTRUCTURE PROJECTS MAP
CALIFORNIA - BAJA CALIFORNIA 2004



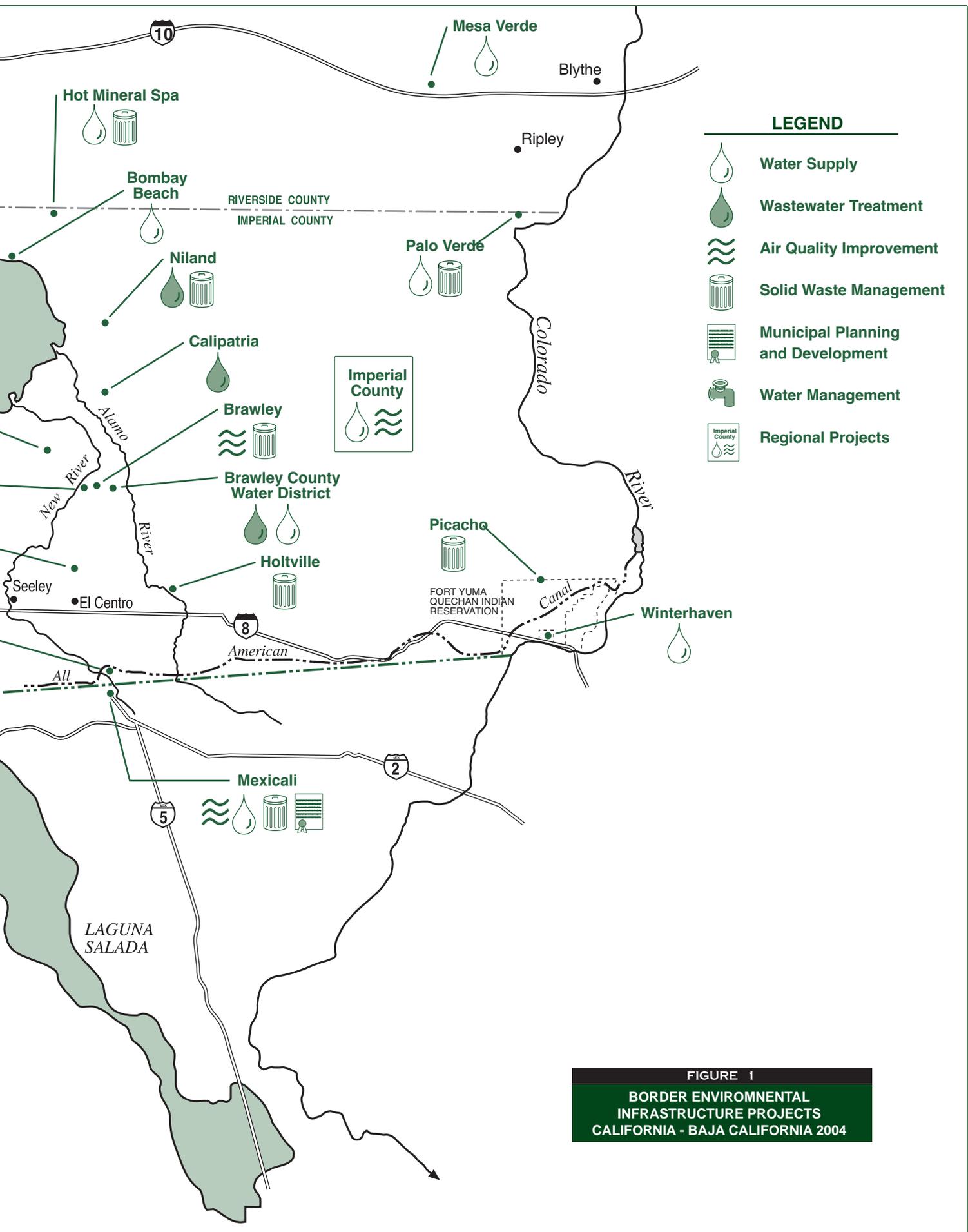
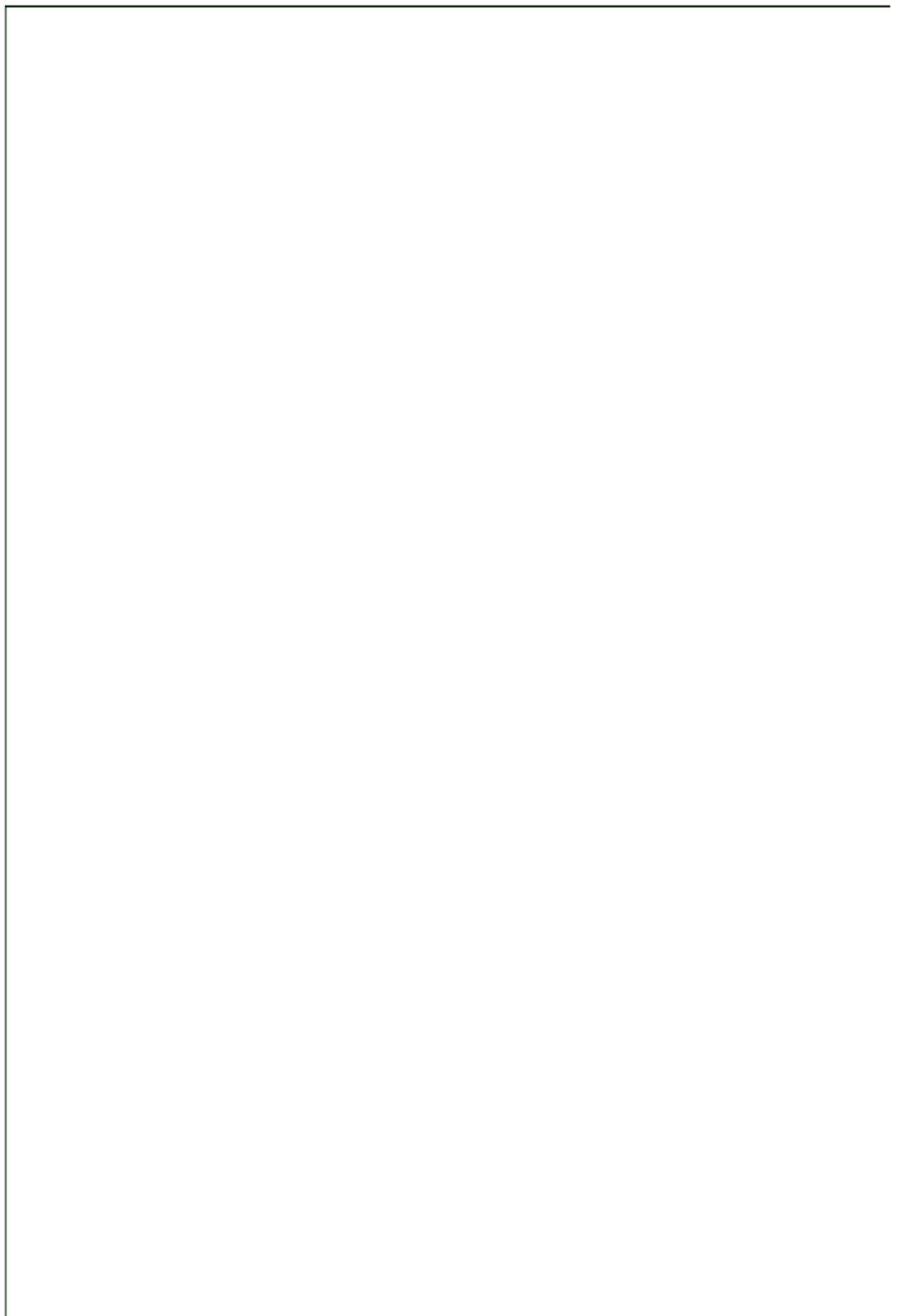


FIGURE 1
BORDER ENVIRONMENTAL
INFRASTRUCTURE PROJECTS
CALIFORNIA - BAJA CALIFORNIA 2004



BORDER ENVIRONMENT COOPERATION COMMISSION



CONSTRUCTION OF NEW WATER TANK IN HEBER, CA. FORMS PART OF THE HEBER WATER TREATMENT PLANT IMPROVEMENTS PROJECT.





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BACKGROUND

The Border Environment Cooperation Commission (BECC) is the result of efforts by the Governments of the United States and Mexico to address the environmental and human health problems that exist along their common border. The BECC is an international organization created in November of 1993 to promote the conservation, protection, and improvement of the environment in the U.S.-Mexico border region, through the development and certification of environmental infrastructure projects in a framework of sustainability and broad public participation. Once certified by the BECC, a project can apply for funding from the North American Development Bank (NADB) or other sources requiring such certification.

The BECC is authorized to consider water pollution, wastewater treatment, and municipal solid waste management projects and projects addressing other related matters. Other related matters include hazardous waste, water conservation, hookups to water and sewer systems, and waste reduction and recycling. In the autumn of 2000, the Boards of Directors of the BECC and NADB authorized both institutions to expand their work to new sectors of environmental infrastructure. The purpose of this initiative was to allow for better use of NADB's lending capabilities and provide greater opportunities to apply BECC's innovative practices. Projects related to air quality, transportation, clean and efficient energy, and municipal planning and development, including water management, may also be considered for development.

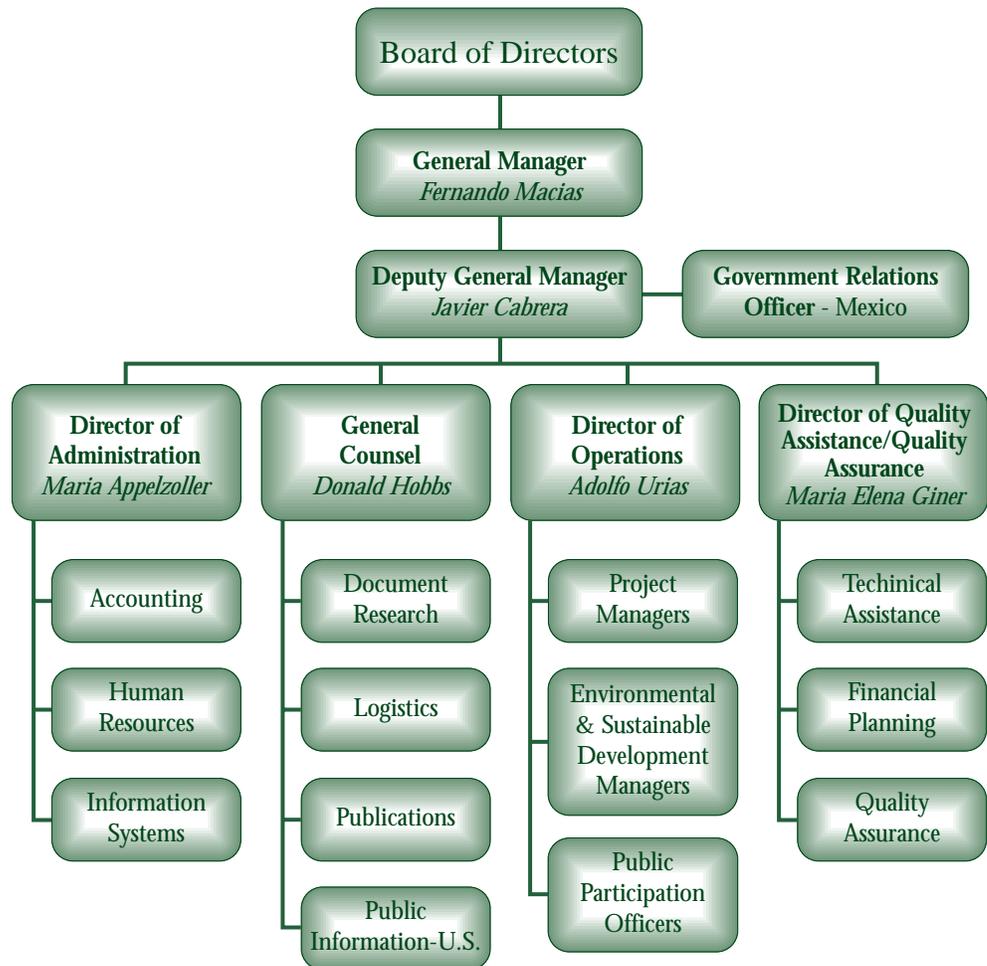
BUDGET

The BECC's operating budget is funded by contributions from Mexico, through the Secretariat of the Environment and Natural Resources (SEMARNAT), and from the United States, through both the Department of State and the U.S. Environmental Protection Agency (USEPA). In addition to its operating budget, the BECC manages the Project Development Assistance Program (PDAP), which is funded with contributions from the USEPA. This program allows the BECC to use grant funds to support border communities in the development of their water and wastewater projects.

ORGANIZATION

In 2003 the BECC's structure continued to include a Board of Directors, an Advisory Council and a binational Management team. BECC's governing body is its Board of Directors, composed of ten members (five from each country), which represents the three levels of government and civil society on the border. The BECC's Advisory Council included 18 members (nine from each country). The BECC's General Manager and Deputy General Manager are responsible for overseeing the institution's daily operations.

A general diagram of the organizational structure of the BECC is shown below.



PROJECT CERTIFICATION PROCESS

The BECC's primary role is to develop and authorize projects, which are subsequently funded by the NADB or other funding institutions. To fulfill this role, the BECC gives primary importance to technical and financial aspects of each project, such as the use of appropriate non-polluting technologies with low operating and maintenance costs, and a viable financial structure that reflects affordable rates. Additionally, BECC makes a significant contribution to the project development process by ensuring project information availability, broad public participation and implementation of sustainability principles. The Commission also facilitates coordination between different government agencies at the federal, state, and local levels, in order to ensure that projects comply with the requirements and standards of each institution.

The certification process begins with an Application for Project Certification received from a Project Sponsor (normally a local community). The Application is submitted to the Rapid Assessment Process (RAP), where the existing conditions are evaluated so as to establish the comprehensive need to be

addressed by the project. During the RAP, a Project Strategic Plan (PSP) is developed which reviews the project sponsor's institutional capacities, identifies possible obstacles for implementing the project, defines a potential funding strategy, and determines the technical assistance needs to achieve certification. It ensures that the efforts and activities of the project sponsor and participating agencies are coordinated and described in a detailed project schedule, an important tool to guide the timely development of the project. The final PSP and project schedule provide the definition of tasks that are developed into a scope of work to be procured for consultant services, which secures the support services necessary for the development of the project.

The Planning and Environmental Assessment, Public Participation and Financial Feasibility phases determine the recommended action to address the environmental infrastructure needs defined during the RAP. Technical, financial, and environmental studies are conducted for the project. These studies include the evaluation of project alternatives in respect to technical and financial feasibility and impact to the environment and human health characteristics of the community. The efforts to meet the minimum sustainable development criteria are initiated during this phase and important milestones are accomplished such as rating technical alternatives with the participation of community representatives.

These efforts are supported by on-going public participation activities including the establishment of a local steering committee and development of a community participation plan, which describes the outreach strategy to achieve public support for the technical and financial aspects of the project. The community outreach includes project information availability and distribution, providing presentations to local organizations and scheduling at least two public meetings where the details of the project are discussed.

Once appropriate environmental assessments have been successfully concluded, final design for the project may begin. During the design process, both sustainable development and community participation efforts are continued which may include community awareness programs for conservation and responsible use of resources along with important design reviews by utility operators. It is also during the design phase when project cost estimates are developed to a level appropriate to continue the financial feasibility analysis, which includes developing rate studies and a final financial structure to construct the project. The results of these financial studies are presented at the final public meeting and the community is given updated technical information for the project's implementation. Successful conclusion of this process provides documented compliance with BECC criteria. After a final general public comment period, the project is presented to the Board of Directors for certification and subsequent funding by the North American Development Bank (NADB) and other funding sources.

THE PROJECT CERTIFICATION PROCESS



PROJECT DEVELOPMENT ASSISTANCE PROGRAM (PDAP)

The BECC's Project Development Assistance Program (PDAP) assists communities in planning and designing water and wastewater projects along the United States-Mexico border. Funding for these projects comes from the USEPA, which has awarded the BECC US\$36 million. To access PDAP grant funds, the project sponsor must demonstrate a need for technical assistance and be eligible for Border Environment Infrastructure Fund (BEIF) assistance. The USEPA is involved in the disbursement of these funds only when the contract amount exceeds \$500,000.

SOLID WASTE MANAGEMENT ASSISTANCE

The BECC also provides technical assistance for the development of solid waste projects. These funds have been allocated from the BECC's operating budget.

TECHNICAL ASSISTANCE FOR NEW SECTOR PROJECTS

Limited funding on a case-by-case basis is available to support the development of new sector projects.

PROJECT DEVELOPMENT MANUAL

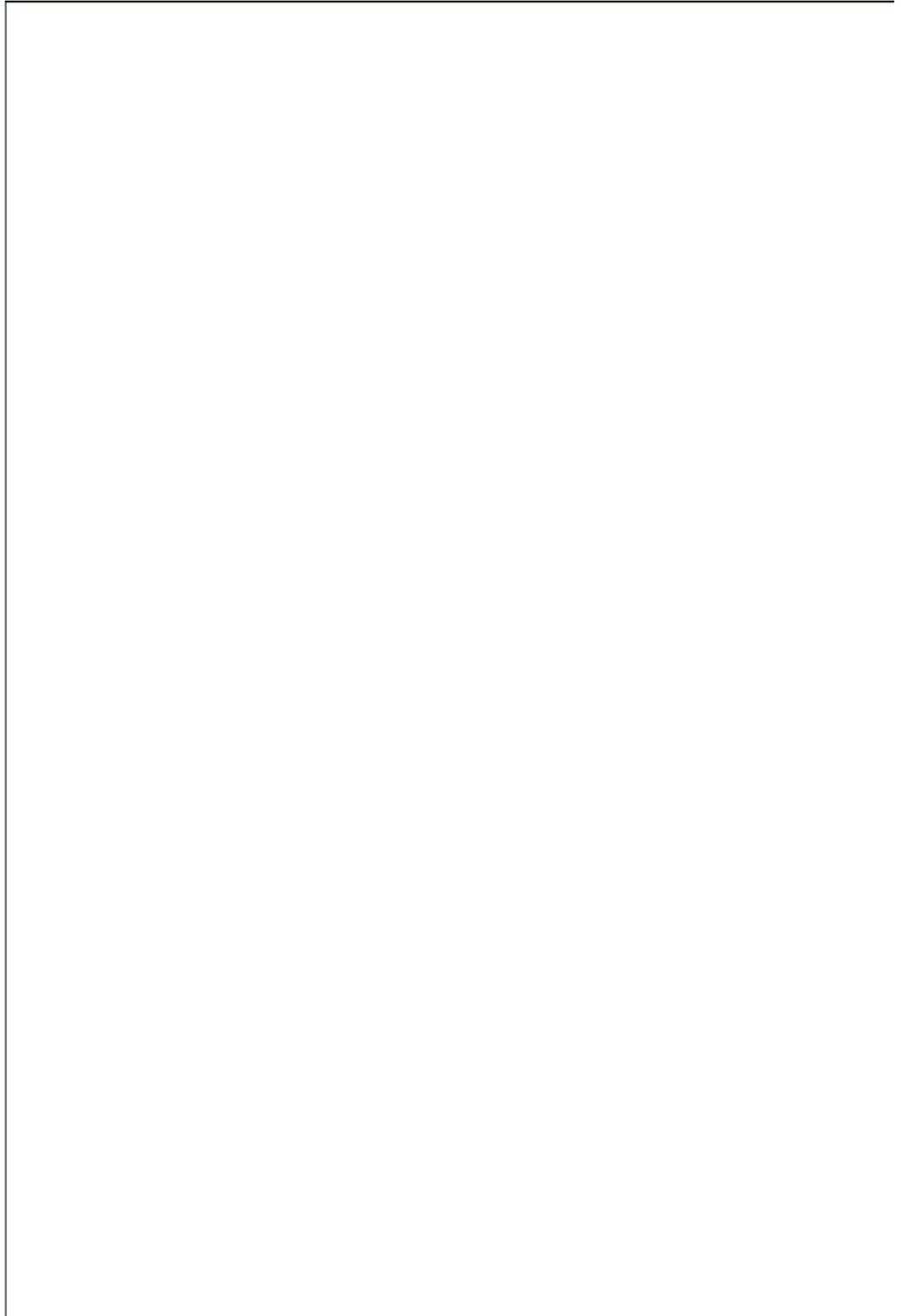
In 2002, the BECC developed and implemented a project management procedures manual, which presents a systematic overview of the procedures that a project must successfully complete before being submitted to the Board of Directors for certification. This manual, being a more uniform approach to BECC's project development process, provides a blueprint allowing the BECC's staff to define particular duties, responsibilities, and tasks during each phase of the project development process. The manual defines a quality management plan, which specifies quality control activities, such as contract reviews, consulting services control, documents control, and procurement follow-up, ensuring compliance with BECC's procedures and criteria. The manual allows for greater control and effectiveness in the development of each project. A copy of the manual may be obtained by contacting the BECC.

INSTRUCTION BOOKLET – "HOW TO COMPLY WITH CERTIFICATION CRITERIA RELATED TO SUSTAINABLE DEVELOPMENT"

With the purpose of facilitating the understanding and implementation of sustainability principles, the BECC published an instruction booklet. The booklet is intended to assist engineering and environmental consultants, as well as project sponsors and community residents. The compliance process is detailed as a step-by-step approach to accomplish the tasks necessary to meet objectives of the sustainable development criteria. More specifically, instructions are provided to describe how and when to incorporate community input in the selection, review and ranking of technical alternatives proposed to meet the community's need. Examples of indicator worksheets, validation exercises and rating activities are provided as an additional tool. A copy of the booklet may be obtained by contacting the BECC.

PUBLIC PARTICIPATION MANUAL

The BECC Public Participation Manual for Border Communities and project sponsors was created in 2002 as a basic tool that offers practical techniques and methods to guarantee meaningful public participation. The manual synthesizes, applies and improves on the experiences gained by the commission the past seven years. The manual is organized for planning and implementation and is based on the premise that public participation will improve decisions and the decision-making process itself. The manual is a response to the challenge of an ever-changing border region where the trend is for increased public participation in decisions that affect people and future generations. A copy of the manual may be obtained by contacting the BECC.



CALIFORNIA DEPARTMENT OF HEALTH SERVICES



NEW RIVER SAMPLING IN CALEXICO, CA.



California Department of Health Services

FOR INFORMATION CONTACT:

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BACKGROUND

The California Department of Health Services (CDHS) is part of the California Health and Human Services Agency. The CDHS is one of the largest departments in State government, with over 5,000 employees working in its Sacramento headquarters and over 60 field offices throughout the State.

As part of its mandate, the CDHS administers a broad range of public and clinical health programs that provide health care services to Californians. The mission of the CDHS is to protect and improve the health of all Californians.

The CDHS values:

- Its clients and the beneficiaries of the service it provides;
- Its employees and investment in their growth and training;
- Leadership and excellence in the field of public health and medical care services.
- Commitment to public service;
- Diversity, equality of opportunity, and cultural competency as essential parts of everything that we do;
- Prevention and access as the cornerstones of maintaining and enhancing health;
- Its partners and collaborative relationships in improving the health of all Californians;
- Good science and analysis, which are critical to establishing and implementing effective policies and programs; and
- The statutes, laws and regulations that establish its functions.

In the administration of its programs, the CDHS frequently partners with other state departments, state agencies, hospitals, clinics, health plans, local health jurisdictions and community-based organizations. Without these partnerships, the CDHS would be unable to meet its mission in a state as vast as California. The CDHS recognizes the integral role of its partners in delivering high-quality programs and protecting the health of the public. It has made it a priority to foster excellent working relationships by promoting open communication, collaboration, problem solving, and strong partnerships.

FUNDING OPPORTUNITIES FOR WATER PROJECTS

As mentioned above, the CDHS offers a wide range of programs to assist California communities and its residents. For the purposes of this report, below is a brief summary of CDHS programs available to develop and implement water projects. For additional information regarding other programs available please visit the CDHS website at www.dhs.ca.gov.

Proposition 50

During the November 2002 general election, California voters passed Proposition 50, The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, Water Code Section 79400, et seq. In August 2003, Assembly Bill 1747 was signed into law and took effect immediately, clarifying some of the Proposition 50 requirements.

CDHS is responsible for implementing Chapter 3 (Water Security) and Chapter 4 (Safe Drinking Water), and Sections (b) and (c) of Chapter 6, which address treatment technology. CDHS' Prop 50 funding process will follow a timetable, which is currently being drafted. Additionally, CDHS is developing ranking criteria for projects for each funding category. For the most updated information regarding the proposed timetable and ranking criteria including eligibility requirements visit CDHS' Proposition 50

website at ww.dhs.ca.gov/ps/ddwem/Prop50/default.htm. For additional information regarding Proposition 50 programs, you may also contact Gary Yamamoto, DHS' Drinking Water Technical Programs Branch, at 916-449-5647.

Proposition 50, Chapter 3: Water Security (\$50 million)

Provides funds to protect state, local and regional drinking water systems from terrorist attack or deliberate acts of destruction or degradation. These funds may be used for monitoring and early warning systems, fencing, protective structures, contamination treatment facilities, emergency interconnections, communications systems, and other projects designed to prevent damage to water treatment, distribution, and supply facilities, to prevent disruption of drinking water deliveries, and to protect drinking water supplies from intentional contamination.

Proposition 50, Chapter 4: Safe Drinking Water (\$435 million)

Provides assistance in meeting safe drinking water standards. Chapter 4 includes funding for the following:

Water Code §79530(a)(1)-(a)(5) provides approximately \$70 million for five new grant programs:

- **Grant Program 1:** Grants to small community water systems (<1,000 service connections or <3,300 persons) to upgrade monitoring, treatment, or distribution infrastructure.
- **Grant Program 2:** Grants to finance development and demonstration of new treatment and related facilities for water contaminant removal and treatment.
- **Grant Program 3:** Grants for community water system water quality monitoring facilities and equipment.
- **Grant Program 4:** Grants for drinking water source protection.
- **Grant Program 5:** Grants for treatment facilities necessary to meet disinfectant by-product safe drinking water standards.

Water Code §79530(a)(6) provides approximately \$90 million for the Drinking Water State Revolving Fund (DWSRF). The DWRSF is an established program and is administered separately from the new grant programs addressed by the ranking criteria proposed for Proposition 50. This program is described below.

Water Code §79530(b) provides approximately \$260 million to Southern California projects to address the Colorado River 4.4 million acre-feet (MAF) requirement.

Assembly Bill 1747 requires that priority be given to projects that reduce public and environmental exposure to contaminants that pose the most significant health risks, and that will bring water systems into compliance with safe drinking water standards (maximum contaminant levels, MCLs). These include, but are not limited to, projects that address public exposure to contaminants for which safe drinking water standards have been established including arsenic, disinfection byproducts and uranium. Projects to address emerging contaminants, including perchlorate, chromium-6, and endocrine disrupters shall also be given priority.

Proposition 50, Chapter 6: Contaminant Removal Technologies (\$50 million)

Proposition 50's Chapter 6 projects relate to contaminant and salt removal technologies.

CDHS' involvement with Chapter 6 will focus on funding that addresses pilot and demonstration projects for certain contaminants (Section b, listed below), and for projects related to ultraviolet (UV) and ozone treatment. Salt removal technologies in Chapter 6 will be handled by the Department of Water Resources (DWR).

Chapter 6, Section (b) provides funding for pilot and demonstration projects for treatment or removal technology for the following categories of contaminants:

- Petroleum products, such as MTBE and BTEX (benzene, toluene, ethylbenzene, xylene)
- N-Nitrosodimethylamine (NDMA)
- Perchlorate
- Radionuclides, such as radon, uranium, and radium
- Pesticides and herbicides
- Heavy metals, such as arsenic, mercury, and chromium
- Pharmaceuticals and endocrine disrupters

Drinking Water State Revolving Fund (DWSRF) Program

Provides low interest loans and grants to assist public water systems in achieving or maintaining compliance with the Safe Drinking Water Act. The DWSRF Program provides funding to correct public water systems deficiencies based upon a prioritized funding system. The funding system utilizes a comprehensive multi-year Project Priority List, whereby certain projects receive higher funding priority than other eligible public water system projects. Higher priority projects include:

- Public water systems projects addressing public health risk problems;
- Public water systems projects needed to comply with the Safe Drinking Water Act; and
- Projects assisting public water systems most in need on a per household affordability basis.

For additional information regarding the DWSRF Program, you may visit www.dhs.ca.gov/ps/ddwem/SRF/SRFindex.htm or contact Robin Hook, DWSRF Program Branch, at 916-449-5624.

Proposition 13 – The Water Bond

On March 7, 2000 California voters passed a water bond, "Proposition 13." DHS was designated to receive \$70 million from the sale of general obligation bonds approved in the ballot measure:

- \$68 million to be used as the state match to access ~\$340 million in federal capitalization grant funds for Public Water Systems infrastructure improvements during the subsequent four years, and
- \$2 million to be used to provide technical assistance to Public Water Systems including disadvantaged communities.

More information on Proposition 13 can be obtained from the State Water Resources Control Board and the Department of Water Resources (see appropriate sections within this report).

CALIFORNIA DEPARTMENT OF HOUSING & COMMUNITY DEVELOPMENT



THE CITY OF CALEXICO IS THE ONLY BORDER CITY DESIGNATED AS A CALIFORNIA ENTERPRISE ZONE (CALEZ). CALEZ WAS CREATED TO STIMULATE GROWTH IN THE MOST ECONOMICALLY DISTRESSED AREAS THROUGHOUT THE STATE.





California Department of Housing & Community Development

FOR INFORMATION CONTACT:

Alan Jones

Program Manager-General, Native American and Colonias Allocations Community Development Block Grant (CDBG) Program

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Phone: 916-263-0485 (general)
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Ben Delaney

Program Manager

California Indian Assistance Program
1800 3rd Street, Room 365
Sacramento, CA, 95814

Phone: 916-445-4727

Home Page: www.hcd.ca.gov/ca

The California Department of Housing & Community Development (HCD) administers more than 20 programs that award loans and grants for the construction, acquisition, rehabilitation and preservation of affordable rental and ownership housing, homeless shelters and transitional housing, public facilities and infrastructure, and the development of jobs for lower income workers. These loans and grants, with rare exceptions, are not made to individuals, but to local public agencies, nonprofit and for-profit housing developers, and service providers. In many cases these agencies then provide funds to individual end users.

A Funds Available Calendar (FAC) that lists current Notices of Funding Availability (NOFAs) for HCD's loan and grant programs is available at www.hcd.ca.gov. For information about non-HCD funding sources, visit the Clearinghouse at <http://www.hcd.ca.gov/clearinghouse/> for Affordable Housing and Community Development Finance, which lists over 200 State, federal and private sources of assistance by type and geographical availability.

Two of our grant programs that can benefit California border communities in the development and implementation of environmental infrastructure projects include the Community Development Block Grant Program (CDBG) and the California Indian Assistance Program (CIAP).

CALIFORNIA INDIAN ASSISTANCE PROGRAM

Provides assistance to California Indian tribal governments and California Indian communities to obtain and manage state and federal funds for housing, infrastructure, community and economic development projects, and governance enhancement. CIAP staff provides technical assistance, including grant writing, to help tribes obtain funds from other agencies. Technical assistance is provided on request at no cost to recipients, on a first come, first served basis.

Eligible activities include consultant and grant writing services to California Indian tribes for preparation of grant applications for housing rehabilitation, housing construction, economic development, community facility development, cultural enhancement, environmental protection, governmental capacity building, etc. Fund sources include U.S. Department of Housing and Urban Development (HUD) Indian programs, State Community Development Block Grant programs, Bureau of Indian Affairs (BIA), Indian Health Service, the U.S. Department of Health and Human Services Administration for Native Americans Programs, and the Economic Development Administration (EDA).

For additional information regarding CAIP, please visit <http://www.hcd.ca.gov/ca/ciap/>. Technical assistance may be requested by contacting the California Indian Assistance Program at (916) 445-4727.

COMMUNITY DEVELOPMENT BLOCK GRANT PROGRAM

The State Community Development Block Grant (CDBG) program was established by the Federal Housing and Community Development Act of 1974, as amended (42 USC 5301, et seq.). Subsequent legislation and regulations allowed states to administer the program for smaller cities and counties. In 1982, California's Executive Branch and Legislature agreed that the State should administer the program and assigned this responsibility to the Department of Housing and Community Development. The State CDBG program is implemented by the California Health and Safety Code section 50825, et seq, and the California Code of Regulations (Title 25, Section 7050, et seq).

The primary federal objective of the CDBG program is the development of viable urban communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate income. "Persons of low and moderate income" or the

"targeted income group" (TIG) are defined as families, households, and individuals whose incomes do not exceed 80 percent of the county median income, with adjustments for family or household size.

Each year the CDBG program makes funds available to eligible jurisdictions through several allocations: General and Native American, Economic Development, Planning and Technical Assistance, and Colonias. Notices of Funding Availability (NOFAs) are published for each allocation as the funds become available. Successful applicants enter into contracts with the State to complete the specified activities with the grant funds.

For additional information regarding the CDBG Economic Development allocation, please visit <http://www.hcd.ca.gov/ca/cdbg/funds/>.

State CDBG Program-General, Native American, and Colonias Grants

Provides grant funding for housing activities, public works, community facilities, and public service projects serving lower-income people in small, typically rural communities. The maximum grant amount is \$500,000 per year, not including additional amounts available under the Native American and Colonias Allocations. Eligible activities include:

- Housing, including single- and multi-family rehabilitation, rental housing acquisition or homeownership assistance, and activities that complement new construction;
- Public Works, including water and wastewater systems, rural electrification, and utilities such as gas services;
- Community Facilities, including day care centers, domestic violence shelters, food banks, community centers, medical and dental facilities, and fire stations; and
- Public Services, including staff and operating costs associated with the community facilities.

Eligible State CDBG General Fund Applicants are non-entitlement jurisdictions, cities with populations under 50,000 and counties with populations under 200,000 in unincorporated areas that do not participate in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program. Eligible Native American Allocation Applicants are non-entitlement jurisdictions that apply to assist non-federally recognized Native American communities.

Eligible Colonias Allocation Applicants are distressed non-entitlement jurisdictions within 150 miles of the California-Mexico border that contain colonias as defined by the National Affordable Housing Act of 1990.

Applications are invited through an annual Notice of Funding Availability (NOFA). Please visit <http://www.hcd.ca.gov/ca/cdbg/funds/> for more current NOFA and application package or contact Program Administration at (916) 263-0485.

CDBG Program—Planning and Technical Assistance Grants

Provides grant funds for small cities and counties for planning and evaluation studies related to any CDBG-eligible activity. Up to \$70,000 per year per jurisdiction is available. No more than \$35,000 under the General/Native American Allocation and a maximum of \$35,000 under the Economic Development Allocation. Eligible activities include studies and plans for housing, public works, community

facilities, and economic development activities that meet CDBG national objectives, and provide principal benefit to low-income persons.

Eligible applicants include counties with fewer than 200,000 residents in unincorporated areas and cities with fewer than 50,000 residents that are not participants in the U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) entitlement program.

Applications are invited through an annual Notice of Funding Availability (NOFA). There are two funding cycles per year (anticipated for late June and late October) and awards are made after each cycle. Please visit <http://www.hcd.ca.gov/ca/cdbg/funds/> for more current NOFA and application package or contact Program Administration at (916) 263-0485.

CALIFORNIA DEPARTMENT OF WATER RESOURCES



DESERT MOUNTAINS VIEW FROM IH-8 NEAR IMPERIAL-SAN DIEGO COUNTY LINE.



California Department of Water Resources

FOR INFORMATION CONTACT:

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Chief

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Home Page: www.dwr.water.ca.gov

DWR grants and loans website:
www.grantsloans.water.ca.gov

BACKGROUND

The mission of the California Department Water Resources (DWR) is to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments.

The following are summaries of DWR's major responsibilities and goals:

Goal 1 - Prepare and update the California Water Plan to guide development and management of the State's water resources.

Goal 2 - Plan, design, construct, operate, and maintain the State Water Project to supply good quality water for municipal, industrial, agricultural, and recreational uses and for fish and wildlife protection and enhancement.

Goal 3 - Protect and restore the Sacramento-San Joaquin Delta by controlling salinity and providing water supplies for Delta water users, planning long-term solutions for environmental and water use problems facing the Delta, and administering levee maintenance reimbursements and special flood control projects.

Goal 4 - Regulate dams, provide flood protection, and assist in emergency management to safeguard life and property by supervising design, construction, operation, and maintenance of more than 1,200 jurisdictional dams; encouraging preventive floodplain management practices; maintaining and operating Sacramento Valley flood control facilities; cooperating in flood control planning and facility development; and providing flood advisory information.

Goal 5 - Educate the public on the importance of water and its proper use; and collect, analyze, and distribute water-related information to the general public and to the scientific, technical, educational, and water management communities.

Goal 6 - Serve local water needs by providing technical assistance; cooperating with local agencies on water resources investigations; supporting watershed and river restoration programs; encouraging water conservation; exploring conjunctive use of ground and surface water; facilitating voluntary water transfers; and, when needed, operating a State drought water bank.

FUNDING OPPORTUNITIES

Grants and/or loans are available for water conservation, groundwater management, and studies and activities to enhance local water supply reliability. Project eligibility depends on the type of organization(s) applying and participating in the project and the specific type of study or project. More than one grant or loan may be appropriate for a proposed activity.

Grants

Flood Protection Corridor Program

Provides grants to local government agencies and nonprofit organizations for nonstructural flood management projects that include wildlife habitat enhancement and/or agricultural land preservation. Total program funds authorized through Proposition 13, the Water Bond, are \$70 million. A maximum of \$5 million per eligible project can be awarded. For additional information regarding funding availability

and application process, contact Earl Nelson at (916) 574-1244 or via e-mail at enelson@water.ca.gov or visit the DWR's grants and loans website.

Drainage Reuse Program

Provides grants to universities, districts, and other public agencies for research to reduce toxic materials in subsurface agricultural drainage water through reuse of the water and the use of remaining salts. Total program funds authorized through Proposition 204, Safe, Clean, Reliable Water Supply Act, are \$500,000. For additional information, contact Manucher Alemi at (916) 651-9662 or via e-mail at malemi@water.ca.gov or visit DWR's grants and loans website.

Integrated Regional Water Management (IRWM) Program

Funds authorized through Proposition 50, Chapter 8: Integrated Regional Water Management (IRWM), in the amount of \$500 million are available for projects to protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water. Program applicant eligibility by applicant entity type will be determined in the future. A total of \$384 million are available for grants. A maximum of \$50 million per project can be awarded. The Proposition 50, Chapter 8 IRWM grant application proposal solicitation package will be posted at DWR's website in the near future. For additional and updated information, contact Tracie Billington at (916) 651-9226 or via e-mail at tracieb@water.ca.gov.

Infrastructure Rehabilitation Construction Program

Provides grants to public agencies and incorporated mutual water companies in economically disadvantaged service areas with 200 to 16,000 service connections to projects to repair, restore or rehabilitate an existing water distribution system or delivery facilities that result in the reduction of significant water losses or replace a failing system component. Total program funds authorized through Proposition 13 (Water Bond), Chapter 8, Article 5 are \$60 million. A maximum of \$5 million per eligible project can be awarded. For additional information contact Linda Buchanan at (916) 651-9645 or via e-mail at lbuchana@water.ca.gov or by visiting DWR's grants and loans website.

Infrastructure Rehabilitation Feasibility Study

Provides grants to public agencies and incorporated mutual water companies in economically disadvantaged service areas with 200 to 16,000 service connections to fund feasibility studies for projects to repair, restore or rehabilitate existing water distribution facilities or replace failing distribution system components. Total program funds are \$3 million, which are authorized through Proposition 13 (Water Bond), Chapter 8, Article 5. A maximum of \$100,000 per eligible study can be granted. For additional information, contact Linda Buchanan at (916) 651-9645 or via e-mail at lbuchana@water.ca.gov.

Local Groundwater Assistance Program

Provides grants to local public agencies with statutory authority to manage groundwater resources for groundwater data collection, modeling, monitoring and management studies, monitoring programs and installation of equipment, basin management; and development of information systems. Total program funds are \$6 million, which are authorized through Assembly Bill 303 (Groundwater) and Proposition 50 (Water Security, Clean Drinking Water, Coastal and Beach Protection Act). A maximum of \$250,000 per eligible project can be awarded. For additional information contact Harley Davis at (916) 651-9229 or via e-mail at harley@water.ca.gov or visit DWR's grants and loans website.

Urban Streams Restoration Program

Provides grants to local public agency and citizen's group (both required) to reduce urban flooding/erosion, restore environmental values, and promote community stewardship of urban streams. Total program funds are \$5 million per eligible project authorized through Proposition 40 (California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act). A maximum of \$1 million can be awarded per eligible project. For additional information contact Sara Denzler at (916) 651-9625 or via e-mail at sdenzler@water.ca.gov.

Water Desalination Program

Provides grants to local agencies for the development of local water supplies through brackish water and sea water desalination. Total program funds are \$50 million, which are authorized through Proposition 50 (Water Security, Clean Drinking Water, Coastal and Beach Protection Act). For additional information contact Debra Gonzalez at (916) 651-7026 or via e-mail at debrag@water.ca.gov. For technical questions contact Fawzi Karajeh at (916) 651-9669 or via e-mail at fkarajeh@water.ca.gov.

Loans

Agricultural Water Conservation Program

Provides loans to public agencies and incorporated mutual water companies for agricultural capital outlay measures to increase water savings and improve water use efficiency. Total program funds are \$35 million, which are authorized through Proposition 13 (Water Bond), Chapter 8, Article 3. A maximum of \$5 million per eligible project can be awarded. For additional information contact Debra Gonzalez at 916-651-7026 or via e-mail at debrag@water.ca.gov or visit DWR's grants and loans website.

Groundwater Recharge Facilities Program

Provides loans to public agencies and incorporated mutual water companies for groundwater recharge construction projects. Total program funds are \$30 million, which are authorized through Proposition 13, Chapter 8, Article 4. A maximum of \$5 million per eligible project can be awarded. For additional information contact Linda Buchanan at Linda Buchanan (916) 651-9645 or via e-mail at lbh@water.ca.gov or visit DWR's grants and loans website.

New Local Water Supply Feasibility Study Program

Provides loans to local public agencies for studies to assess the feasibility of implementing an eligible local water supply project. Total program funds are \$2 million, which are authorized through Proposition 82. A maximum of \$500,000 per eligible project can be awarded. For additional information contact David A. Rolph at 916-651-9635 or via email at drolph@water.ca.gov or visit DWR's grants and loans website.

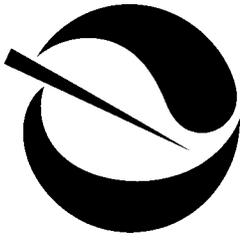
New Local Water Supply Construction

Provides loans to local public agencies for projects such as canals, dams, reservoirs, groundwater extraction facilities or other construction or improvements. Total program funds are \$20 million, which are authorized through Proposition 82. A maximum of \$5 million per eligible project can be awarded. For additional information contact David A. Rolph at 916-651-9635 or via email at drolph@water.ca.gov or visit DWR's grants and loans website.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY



CAL/EPA IS RESPONSIBLE FOR COORDINATING AND PRIORITIZING THE STATE'S EFFORTS TO PROTECT THE ENVIRONMENT.



California Environmental Protection Agency

FOR INFORMATION CONTACT:

Office of the Secretary
1001 I Street, 25th Floor
Sacramento, California 95814

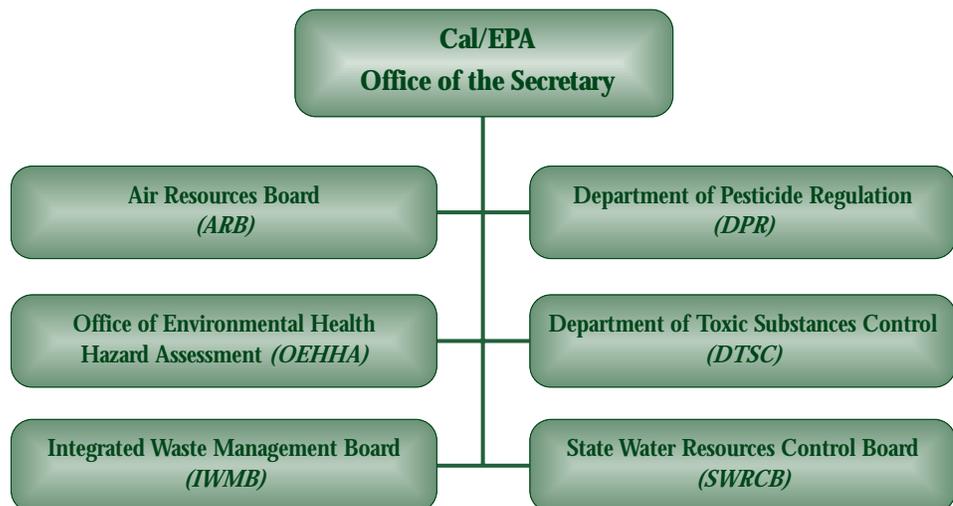
Phone: 916-445-3846
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Email: cepacomm@calepa.ca.gov

Home Page: www.calepa.ca.gov

BACKGROUND

The California Environmental Protection Agency (Cal/EPA) was created in 1991 by Governor's Executive Order. The mission of the Cal/EPA is to restore, protect and enhance the environment, to ensure public health, environmental quality and economic vitality. Cal/EPA consists of six Boards, Departments and Office, which were placed within the Cal/EPA "umbrella" to create a cabinet level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources.

Cal/EPA's Office of the Secretary leads the Agency and is responsible for overseeing and coordinating the activities of all six Boards, Departments, and Office (BDOs) shown below.



The Secretary does not direct policies and decisions of the Boards, Departments and Office on a day-to-day basis. As an officer of the Governor's Cabinet with statutory responsibility to coordinate and supervise the overall performance of the Agency, the Secretary provides the vision and leadership that focuses the efforts of the Boards, Departments and Office of Cal/EPA on the goals of the Administration.

The specific functions to be performed within the Office of the Secretary of Cal/EPA include budget review, review of personnel management, enforcement coordination, information management coordination, strategic planning and pollution prevention.

In addition to these agency duties, the Legislature has given the Office of the Secretary several specific programmatic responsibilities, which are listed below.

- Unified Program
- Children's Environmental Health
- Enforcement
- Environmental Justice
- Environmental Management and Sustainability Project
- Environmental Protection Indicators for California (EPIC)
- Quality Improvement

For additional information regarding these and other programs within Cal/EPA, please visit www.calepa.ca.gov.



Air Resources Board

BORDER COORDINATOR CONTACT

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BACKGROUND

The California Air Resources Board (ARB) conducts research, monitors California's air quality and sets policies for controlling emissions from motor vehicles. Since its formation in 1967, the ARB has worked with the public, the business sector, and local governments to protect the public's health, the economy, and the state's ecological resources through the most cost-effective reduction of air pollution. ARB's programs for cleaner air range from research and regulation to enforcement and education. Specifically, the ARB:

- Sets and enforces emission standards for motor vehicles, fuels, and consumer products;
- Sets health-based air quality standards;
- Conducts research on a variety of topics as diverse as health and crop damage, atmospheric science and new technology;
- Monitors air quality;
- Identifies and sets control measures for toxic air contaminants;
- Provides compliance assistance for businesses;
- Produces education and outreach programs and materials; and
- Oversees and assists local air quality districts, which regulate most non-vehicular sources of air pollution. With the support of the ARB, these districts set emissions limits for stationary sources such as factories and power plants. In addition, ARB helps districts enforce local pollution control rules by providing technical assistance and testing equipment when needed.

The ARB and local air district programs and policies are designed to lower pollution levels to meet air quality standards and provide a healthy environment for California's residents.

FUNDING OPPORTUNITIES

The Air Resources Board offers several funding opportunities to assist public and private entities reduce air pollution. Below is a list of grants, for which border communities may qualify. For a more extensive list of available grants throughout California, please visit the ARB website.

CARL MOYER MEMORIAL AIR QUALITY STANDARDS ATTAINMENT PROGRAM

Provides incentive grants to reduce emissions from heavy-duty diesel engines. The incentive grants cover the incremental cost of cleaner on-road, off-road, marine, locomotive and stationary agricultural pump engines, as well as forklifts and airport ground support equipment. The incentive program focuses on reducing emissions of smog-forming oxides of nitrogen (NOx), but will also reduce particulate emissions.

Please call the contact person for your respective Air Pollution Control District (APCD) for further information on the Carl Moyer Program. Below are the contacts for California border counties:

Imperial County APCD
Matt Dessert
(760) 482-4606
mattdessert@imperialcounty.net

San Diego County APCD
Chuck Spagnola
(858) 650-4674
Chuck.Spagnola@sdcounty.ca.gov

South Coast AQMD (includes major portions of Riverside County)
Connie Day
(909) 396-3055
CDay@aqmd.gov

For updated contact information, please visit <http://www.arb.ca.gov/msprog/moyer/contacts.htm>

INNOVATIVE CLEAN AIR TECHNOLOGIES (ICAT) PROGRAM

ICAT Program funds the development and demonstration of technologies that reduce air pollution. The ARB issues an ICAT request for proposals (RFP) once each fiscal year. Project must be technically feasible, reduce air pollution, have good market potential, have potential for job creation in California, and meet administrative requirements such as matching funds and the minority, women, and disabled veteran requirement.

For further information, you may contact:
California Air Resources Board
Research Division--Innovative Clean Air Technologies
(916) 323-1067

VOLUNTARY ACCELERATED VEHICLE (VAVR) PROGRAMS

VAVR programs, sometimes referred to as scrap, clunker, or old vehicle buy back programs, pay owners of eligible vehicles to voluntarily retire their older, higher-emitting vehicles. If your vehicle has failed its most recently required smog check inspection, you may be eligible for the Bureau of Automotive Repair (BAR) vehicle retirement program. Call 1-800-952-5210 or 1-800-622-7733 or check www.smogcheck.ca.gov for more information about this program.

ALTERNATIVE FUELS INFRASTRUCTURE DEMONSTRATION PROGRAM

Provides cost-share assistance for Alternative Fuels Vehicles (AFV) fueling facility projects in California. The program assists public fleets expand their use of alternative fuels by helping offset capital equipment and installation costs at strategically located stations that can offer alternative fuels at competitive prices. Grant funding applicants must be either public agencies or private entities that partner or assist public agencies that will own, operate, or be a primary user of the AFV fueling facility. Public agencies include cities, counties, special districts, universities, colleges, and federal and state agencies.

Due to California's budget shortfall, funding for this program is not available for new awards at the time of this publication. However, additional funding may be available in the future.

For updated information regarding the program, contact Peter Ward, California Energy Commission, at (916) 654-4639 or visit www.energy.ca.gov.



Office of Environmental Health Hazard Assessment

BORDER COORDINATOR CONTACT

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Supervising Toxicologist

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Kathryn Dowling

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Home Page: www.oehha.ca.gov

The Office of Environmental Health Hazard Assessment (OEHHA) is responsible for developing and providing risk managers in state and local government agencies with toxicological and medical information relevant to decisions involving public health. State agency users of such information include all boards and departments within Cal/EPA, as well as the Department of Health Services, the Department of Food and Agriculture, the Office of Emergency Services, the Department of Fish and Game, and the Department of Justice.

OEHHA also works with Federal agencies, the scientific community, industry and the general public on environmental and public health issues. Examples of current OEHHA functions and responsibilities include:

- Developing health-protective exposure standards for different media (air, water, land) to recommend to regulatory agencies, including ambient air quality standards for the Air Resources Board and drinking water chemical contaminant standards for the Department of Health Services;
- Carrying out special investigations of potential environmental causes of illness, diseases and deaths. Current and recent activities include investigation of the health effects of air pollutants, pesticides, and other chemical exposures;
- Continuing public health oversight of environmental regulatory programs within Cal/EPA;
- Making recommendations to the Department of Fish and Game and the State Water Resources Control Board with respect to sport and commercial fishing in areas where fish may be contaminated;
- Assessing health risks to the public from air pollution, pesticide and other chemical contamination of food, seafood, drinking water, and consumer products;
- Providing guidance to local health departments, environmental departments, and other agencies with specific public health problems, including appropriate actions to take in emergencies that may involve chemicals; and
- Implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).



Integrated Waste Management Board

BORDER COORDINATOR CONTACT

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BACKGROUND

The California Integrated Waste Management Board (CIWMB) conducts monitoring, research, planning and education programs to address the State's solid waste management needs. The Board, in partnership with local government, industry, and the public, works to reduce solid waste disposal, manage the estimated 66 millions of waste generated in California each year, and ensure environmentally safe solid waste facilities.

Recognizing that existing disposal practices cannot meet the growing volume of solid waste, the Board's programs and policies are designed to address California's solid waste disposal dilemma and lessen the demand upon the State's diminishing natural resources by:

- Establishing regulations that meet environmental concerns and provide flexibility to local governments;
- Emphasizing waste prevention, recycling and composting through review of plans and programs developed by local governments;
- Overseeing local efforts to ensure the environmentally safe disposal of waste that cannot be feasibly reduced, recycled or composted;
- Strengthening the market for materials collected in recycling and composting programs;
- Identifying new and innovative waste diversion and management technologies and improve technologies which currently exist; and
- Coordinating state and local activities toward achievement of overall waste management goals.

Because of California's rapid population growth and the declining number and capacity of landfills, state law requires a 50 percent diversion goal for waste from landfills.

FUNDING OPPORTUNITIES

The California Integrated Waste Management Board offers funding opportunities authorized by legislation to assist public and private entities in the safe and effective management of the waste stream. The following is a list of the grants and loans available through the CIWMB when this publication was printed. For the most up-to-date information and to obtain additional information including applications, funding cycles and eligibility requirements for the current grant and loan programs offered at the Board, please visit <http://www.ciwmb.ca.gov/Grants>. You may also use the grants database to develop reports on grants by county or cycle, or grant cycles by fiscal year.

Information is also available about grants available from other state agencies at <http://getgrants.ca.gov>.

Facility Compliance Loans

Provides interest-free loans for solid waste facilities that pose or may possibly pose a tangible threat to public health or the environment.

Farm and Ranch Cleanup Grants

Provides funding to cities, counties, Resource Conservation Districts, and Native American tribes for the cleanup of illegal solid waste sites on farm or ranch property.

Household Hazardous Waste Grants

Provides local government funding for programs to expand or initially implement Household Hazardous Waste (HHW) programs such as collection programs, educational programs, load checking programs, and programs emphasizing waste reduction, source reduction, reuse or recycling of HHW.

Landfill Closure Loans

Provides zero interest loans to operators of unlined, older-technology landfills who are interested in early closure of their facilities.

Local Enforcement Agency Grants

Provides grant funds, based on population and solid waste facilities, to Local Enforcement Agencies to assist in their solid waste facilities permit and inspection program.

Recycling Market Development Zone (RMDZ) Loans

Provides direct loans to businesses that use post consumer or secondary waste materials to manufacture new products, or that undertake projects to reduce the waste resulting from the manufacture of a product.

Reuse Assistance Grants

This competitive grant program provides incentives for local public agencies to promote and apply the concept of reuse to their business communities.

Solid Waste Disposal and Site Cleanup Grants

Local governments can apply for funds to finance a wide range of remediation projects, including funds for cleanup or emergency actions, loans to responsible parties, or matching funds to assist in remediation of environmental problems at landfill.

Sustainable Building Grants

Provides local government funding for that projects that advance the use of green building design and construction practices in California.

Tire Grants

Several different grants programs are available to local governments for the purpose of diverting tires from landfill disposal by promoting markets of recycled-content products, as well as for enforcement and cleanup.

Unified Education Strategy Grants

This competitive grant program is intended to provide school districts with resources to research, plan, and implement waste management and resource conservation programs that are integrated with instructional strategies focused at the sixth grade level.

Used Oil Grants

Several different grant programs are available for assisting local governments, nonprofit entities, and other parties for activities that encourage appropriate disposal and recycling of used oil.



Department of Pesticide Regulation

BORDER COORDINATOR CONTACT

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BACKGROUND

The California Department of Pesticide Regulation (DPR) protects human health and the environment by regulating pesticides sales and use and fostering reduced-risk management. DPR's oversight includes product evaluation and registration, environmental monitoring, residue testing of fresh produce, and local use enforcement through the county agricultural commissioners.

The DPR's integrated network of programs is designed to ensure that pesticides are used safely in order to protect human health and the environment while providing adequate tools and alternatives for pest management. Through DPR's programs, the following are accomplished:

- Pesticide safety and efficacy are scientifically evaluated before use;
- Businesses that sell or apply pesticides are licensed;
- Pesticide specialists enforce restrictions to ensure safe use of pesticides in the workplace and elsewhere;
- Water, air and soil are monitored for pesticide levels to ensure that residues do not adversely affect public safety or the environment; and
- Imported and domestic produce is tested for pesticide residue to safeguard the public health.

FUNDING OPPORTUNITIES

The Department of Pesticide Regulation offers several grant programs to public and private entities to address pest management issues. However, due to California's budget shortfall, funding for Pest Management Grants and the Pest Management Alliance Program is not available for new awards at this time. For updated information regarding DPR's grant programs, please visit www.cdpr.ca.gov and click on "Grants & Awards" button.

Pest Management Grants Program

Provides funding to public and private entities interested in investigating and developing innovative pest management practices that lead to adoption of reduced-risk pest management systems. The intent of the program is to encourage voluntary group efforts to develop pest management practices that reduce pesticide risks, through local and regional demonstration and applied research projects. Emphasis is placed on projects that can be implemented and clearly demonstrate reduced-risk.

Pest Management Alliance Program

Provides funding to address important pest management issues on a statewide scale. An Alliance is devoted to reducing pesticide risks, while at the same time, establishing a dialogue between DPR and the regulated community. Commodity groups, trade associations, and others are encouraged to address priority areas of concern – such as finding alternatives to highly toxic pesticides, protecting surface and ground water quality, developing IPM policy for public schools and other public buildings, and dealing with pesticide problems in urban situations.

Integrated Pest Management Innovator Awards

This program honors California organizations that emphasize pest prevention, favor least-toxic pest control, and share their successful strategies with others. For additional information regarding this program, please contact Charlie Hunter, DPR, Pest Management & Licensing Branch at 916-324-4100 or visit DPR's website.



DEPARTMENT OF TOXIC
SUBSTANCES CONTROL

Department of Toxic Substances Control

BORDER COORDINATOR CONTACT:

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Home Page: www.dtsc.ca.gov

The Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans-up existing contamination, and looks for ways to reduce the hazardous waste produced in California. Close to 1,000 scientists, engineers, and specialized support staff make sure that companies and individuals handle, transport, store, treat, dispose of, and clean-up hazardous wastes appropriately.

DTSC operates programs to:

- Deal with the aftermath of improper hazardous waste management by overseeing site cleanups;
- Prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store and dispose of wastes do so properly;
- Take enforcement actions against those who fail to manage hazardous wastes appropriately;
- Explore and promote means of preventing pollution, and encourage reuse and recycling;
- Evaluate soil, water and air samples taken at sites, and develop new analytical methods;
- Practice other environmental sciences, including toxicology, risk assessment, and technology development; and
- Involve the public in DTSC's decision-making.

Through these measures, DTSC contributes to greater safety for all Californians, and less hazardous waste reaches the environment.



State Water Resources Control Board

BORDER COORDINATOR CONTACT

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BACKGROUND

The mission of the State Water Resources Control Board (SWRCB) is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

Working with the SWRCB are nine Regional Water Quality Control Boards (RWQCBs). The mission of the RWQCBs is to develop and enforce water quality objectives and implementation plans, which will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology and hydrology. RWQCBs develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality.

The task of protecting and enforcing the many uses of water, including the needs of industry, agriculture, municipal districts, and the environment is an ongoing challenge for the SWRCB and RWQCBs. Border Environmental Program

In addition to the planning, monitoring and enforcement programs it coordinates, the SWRCB directs the State's border environmental efforts through the Border Environmental Program (BEP). The BEP is a collaborative effort that includes the California Environmental Protection Agency (Cal/EPA), other California State Agencies, Baja California, and Tribal Nations located along the border region. To ensure that environmental issues are addressed on a multimedia basis, all Cal/EPA boards, departments and offices actively participate in the BEP. The SWRCB provides oversight and coordination, and directs border efforts through the BEP.

The mission of the BEP is to work towards a better environment within our shared border by identifying and resolving unique environmental and natural resource challenges, and the resulting public health issues. This mission is achieved through the use of science and technology, uniform enforcement of environmental laws and regulations, and the cooperation and active participation of the various border communities, California Border Indian Tribal Nations, academia, industry, nongovernmental organizations, and the public.

FUNDING OPPORTUNITIES

The State Water Resources Control Board offers funding opportunities to assist public entities, educational institutions and non-governmental organizations.

The following is a list of the grants and loans available through the SWRCB when this publication was printed. For the most up-to-date information and to obtain additional information including applications, funding cycles and eligibility requirements for the current grant and loan programs offered at the Board, please visit <http://www.swrcb.ca.gov/funding>.

Clean Beaches Initiative (CBI) Grant Program

Provides grants to local public agencies and non-profit organizations in order to:

- Improve water quality at public beaches to meet ocean water bacterial standards;
- Improve, upgrade, or convert existing sewer collection systems and septic systems for the restoration and protection of coastal water quality;
- Implement storm water and runoff pollution reduction and prevention programs for the restoration and protection of coastal water quality; and

- Implement best management practices for the restoration and protection of coastal water quality.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$46 million on September 20, 2002. Additional funds are potentially available from Proposition 50. Half the funds will be available in 2003, and the remaining funds are expected to be available in early 2004. Grant funds can be encumbered until December 31, 2006. A maximum of \$5 million per project can be awarded.

For additional information, contact Christopher Stevens, Division of Financial Assistance, at (916) 341-5698 or via email at stevensc@swrcb.ca.gov.

Urban Storm Water Grant Program

Provides grants to local public agencies in order to:

- Implement stormwater runoff pollution reduction and prevention programs;
- Acquire and develop constructed wetlands; and/or
- Implement approved best management practices required by stormwater permits issued by the State Water Resources Control Board or a Regional Water Quality Control Board.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$15 million on September 20, 2002. The grant funds will be made available as part of a Consolidated Request for Proposals encompassing watershed protection and non-point source pollution control projects. Grant funds can be encumbered until December 31, 2006. Only costs related to capital improvements are eligible for grant funding.

For additional information, contact Shahla Farahnak, Division of Financial Assistance, at (916) 341-5737 or via e-mail at farahnas@swrcb.ca.gov

Non-Point Source (NPS) Pollution Control Grant Program

Provides grant funds to local public agencies and non-profit organization for the purpose of protecting the beneficial uses of water through the control of non-point source pollution.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$20 million on September 20, 2002. Additional funds are potentially available from Proposition 50. The grant funds will be made available as part of a Consolidated Request for Proposals encompassing watershed protection and non-point source pollution control projects. Grant funds can be encumbered until December 31, 2006. Only costs related to capital improvements are eligible for grant funding.

For additional information, contact Shahla Farahnak, Division of Financial Assistance, at (916) 341-5737 or via e-mail at farahnas@swrcb.ca.gov

Agricultural Water Quality Grant Program

Provides grant funds to local public agencies and non-profit organizations in order to:

- Improve agricultural water quality through monitoring, demonstration projects, research, and construction of agricultural drainage improvements;
- Reduce pollutants in agricultural drainage water through reuse, integrated management, or treatment; and
- Provide matching funds for federal grant programs.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$12 million on September 20, 2002. Additional funds are potentially available from Proposition 50. The grant funds will be made available as part of a Consolidated Request for Proposals encompassing agricultural water quality projects. Grant funds are available until December 31, 2006. Only costs related to capital improvements are eligible for grant funding. If Proposition 50 funds become available, monitoring costs may potentially be eligible for Proposition 50 funds.

For additional information contact, Jim Marshall, Division of Financial Assistance, at (916) 341-5636 or via e-mail at marshallj@swrcb.ca.gov.

State Revolving Fund (SRF) Loan

Provides low interest, or no interest, loans and other assistance for construction of publicly owned wastewater treatment and recycling works, development and implementation of non-point source and storm drainage pollution correction programs, and implementation of estuary enhancement programs. The SRF program annually loans between \$200 million and \$300 million. Local public agencies whose projects appear on the SRF Priority List are eligible to apply. The SRF Priority List is updated annually. Costs must meet the eligibility criteria specified in the Policy for Implementing the State Revolving Fund for Construction of Wastewater Treatment Facilities. A maximum of \$25 million per state fiscal year per agency will be awarded.

For additional information, contact Darrin Polhemus, Division of Financial Assistance, at (916) 341-5694 or via e-mail at polhemud@swrcb.ca.gov.

Watershed Protection

Provides grant funds to local public agencies and non-profit organizations to develop local watershed management plans that meet the requirements of Section 79078(c) of the California Water Code and to implement watershed protection and water management projects.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$25 million on September 20, 2002. The grant funds will be made available as part of a Consolidated Request for Proposals encompassing watershed protection and non-point source pollution control projects. Grant funds are available until December 31, 2006. Only costs related to capital improvements are eligible for grant funding.

For additional information, contact Shahla Farahnak, Division of Financial Assistance, at (916) 341-5737 or via e-mail at farahnas@swrcb.ca.gov

Coastal Non-Point Source Control (CNPSC) Program

Provides grant funds to Municipalities, local public agencies, educational institutions, and non-profit organizations to restore and protect the water quality and environment of coastal waters, estuaries, bays, and near shore waters and ground waters. Proposition 50 (November 2002) earmarks \$14 million for appropriation by the Legislature.

The grant funds must be appropriated by the Legislature. The grant funds are expected to be available as part of a Consolidated Request for Proposals encompassing watershed protection and non-point source pollution control projects. Only costs related to capital improvements are eligible for grant funding.

For additional information, contact Shahla Farahnak, Division of Financial Assistance, at (916) 341-5737 or via e-mail at farahnas@swrcb.ca.gov

Small Community Wastewater Grant Program

Provides grant funds to “Small communities” with a population less than 20,000 to:

- Improve or upgrade wastewater treatment plants in small, needy communities in order to meet current or anticipated Regional Board requirements;
- Improve or upgrade existing sewer collection systems in small, needy communities that lack adequate sewers; and
- Provide small, needy communities with the opportunity to explore treatment improvement options through planning and design grants.

Priority shall be given to projects that install or replace sewer systems in communities that lack adequate sewers and projects to assist communities with population growth pressures to redesign and expand existing wastewater collection and treatment systems. The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$15 million on September 20, 2002. Additional funds are potentially available from Proposition 50. A portion of the funds is expected to be available in 2003, and the remaining funds available in early 2004. Grant funds can be used until December 31, 2006. Costs must meet a set of criteria specified in the *Implementation Policy for Small Communities Grant Program* designed to ensure that projects are effective. Costs related to capital improvements, land purchase, and treatment facility buy-in are eligible for grant funding. Planning and design work is also eligible for funding.

For additional information, contact David Kirn, Division of Financial Assistance, at (916) 341-5720 or via e-mail at kirnd@swrcb.ca.gov.

Small Community Groundwater Grant Program

Provides grant funds to small, needy communities for the implementation of groundwater treatment improvements and for alternative sources of groundwater. Communities with severe arsenic or nitrate levels in their groundwater will be given priority. The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$10 million on September 20, 2002.

The funds are expected to be available in early 2004. Grant funds can be used until December 31, 2006.

For additional information, contact David Kirn, Division of Financial Assistance, at (916) 341-5720 or via e-mail at kirnd@swrcb.ca.gov.

Agricultural Drainage Management Program

Provides low-interest loans to correct agricultural drainage problems. The program also provides loan and grant funding for Drainage Water Management Units. Drainage Water Management Units are land and facilities for the treatment, storage, conveyance, reduction or disposal of agricultural drainage water, which, if discharged untreated, would pollute or threaten to pollute the waters of the State. Any city, county, district, joint powers authority, or other political subdivision of the state involved with water management. Approximately \$19 million is available. A maximum of \$5 million per project can be awarded. Costs for treatment, storage, conveyance, reduction, or disposal of agricultural drainage water are eligible.

For additional information, contact Paul Marshall, Division of Financial Assistance at (916) 323-4201 or via e-mail at marsp@swrcb.ca.gov.

Agricultural Drainage Loan Program

Provides loans to any city, county, district, joint powers authority, or other political subdivision of the State involved with water management to treat, store, convey, or dispose of agricultural drainage water that threatens waters of the State. Approximately \$11.4 million is available. A maximum of \$2 million per project and \$100,000 for feasibility studies can be awarded. Costs for treatment, storage, conveyance, or disposal of agricultural drainage water are eligible.

For additional information, contact Paul Marshall, Division of Financial Assistance at (916) 323-4201 or via e-mail at marsp@swrcb.ca.gov.

Federal 319 Grant Program

Provides grant funds to:

- Reduce, eliminate, or prevent water pollution resulting from polluted runoff (i.e., nonpoint sources [NPS]) and enhance water quality in impaired waters;
- Focus actions on implementing Total Maximum Daily Loads (TMDLs) to correct those impairments; and
- Implement management activities, consistent with the Plan for California's Nonpoint Source Pollution Control Program (NPS Program Plan), to reduce and prevent pollutants that threaten or impair surface and ground waters.

Local governmental agencies (including special districts, e.g., resource conservation districts or water districts), nonprofit organizations, Indian tribes, and educational institutions are eligible to apply. State or federal agencies may qualify if they are collaborating with local entities and are involved in watershed management or are proposing a statewide project. Approximately \$5 to \$6 million annually based on federal appropriation. A maximum of \$500,000 per project can be awarded.

For additional information contact, Lauma Jurkevics, Division of Financial Assistance, at (916) 341-5498 or via e-mail at ljurkvi@swrcb.ca.gov.

Integrated Regional Water Management Program

Provides grant funds to municipalities and local agencies to:

- Protect and improve water quality;
- Protect communities from drought;
- Improve local water security by reducing dependence on imported water; and
- Implement projects consistent with an adopted integrated water management plan.

The Watershed, Clean Beaches, and Water Quality Act (AB 2534) appropriated \$25 million on September 20, 2002. Proposition 50 (November 2002) earmarks \$200 million for appropriation by the Legislature for competitive grants.

For additional information, contact Leslie Laudon, Division of Financial Assistance, at (916) 341-5499 or via e-mail at laudonl@swrcb.ca.gov.

CALIFORNIA INFRASTRUCTURE AND ECONOMIC DEVELOPMENT BANK



MAQUILADORA IN MEXICALI, B.C.



California Infrastructure and Economic Development Bank

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The California Infrastructure and Economic Development Bank (I-Bank) is a State of California financing authority that promotes the economic growth, quality of life and revitalization of California communities through low-cost financing of infrastructure and economic development projects. The I-Bank's programs include the Infrastructure State Revolving Fund Program, which provides low-cost, long-term financing to local governments for a variety of public infrastructure projects, and the Revenue Bond Financing Program, which provides tax-exempt Industrial Development Revenue Bond financing to qualified manufacturing companies, tax-exempt 501(c)(3) Revenue Bond financing to nonprofit corporations, and other tax-exempt revenue bond financing to public agencies.

INFRASTRUCTURE STATE REVOLVING FUND (ISRF) PROGRAM

The ISRF Program is a source of low-cost, long-term infrastructure financing available to local government entities from the I-Bank. Funds are available to finance a variety of public infrastructure projects important to California's communities. ISRF financing can be leveraged with local, state, and federal grant and loan funds to complete the funding for a project.

ELIGIBLE APPLICANTS

Cities, counties, special districts, assessment districts, joint powers authorities and redevelopment agencies located in the State.

ELIGIBLE PROJECT CATEGORIES

- City Streets, County and State Highways
- Sewage Collection and Treatment
- Water Treatment and Distribution
- Drainage, Water Supply and Flood Control
- Public Safety Facilities
- Port Facilities
- Public Transit
- Power and Communications Facilities
- Solid Waste Collection and Disposal
- Defense Conversion
- Educational Facilities
- Environmental Mitigation Measures
- Parks and Recreational Facilities

FINANCING TERMS

- **Financing Amounts** - \$250,000 to \$10,000,000 per project.
- **Interest Rates** - the interest rate is fixed for the term of the financing and is set at 67% of a tax-exempt "A" rated bond with a weighted average life similar to the I-Bank financing.
- **Amortization Period** - up to 30 years or the useful life of the asset being financed, whichever is less.

- **Fees** - a one-time origination fee of 0.85% of the ISRF financing amount, or \$10,000, whichever is greater, due at closing, and an annual fee of 0.3% of the outstanding principal balance. The origination fee may be included in the ISRF financing amount.
- **No Required Match/Leverage** - ISRF financing can be the sole source of financing for a project.

SOURCES OF FINANCING REPAYMENT

- Water, sewer and other enterprise revenues
- General Fund revenues
- Tax increment revenues
- Property assessments/Mello-Roos special taxes
- Other recurring revenues acceptable to the I-Bank

FINANCING STRUCTURE

ISRF financing can be structured as a lease-leaseback, loan, or installment sale, depending upon the revenue stream committed to repay the financing and the borrower's legal authority to enter into the form of financing agreement.

TECHNICAL ASSISTANCE

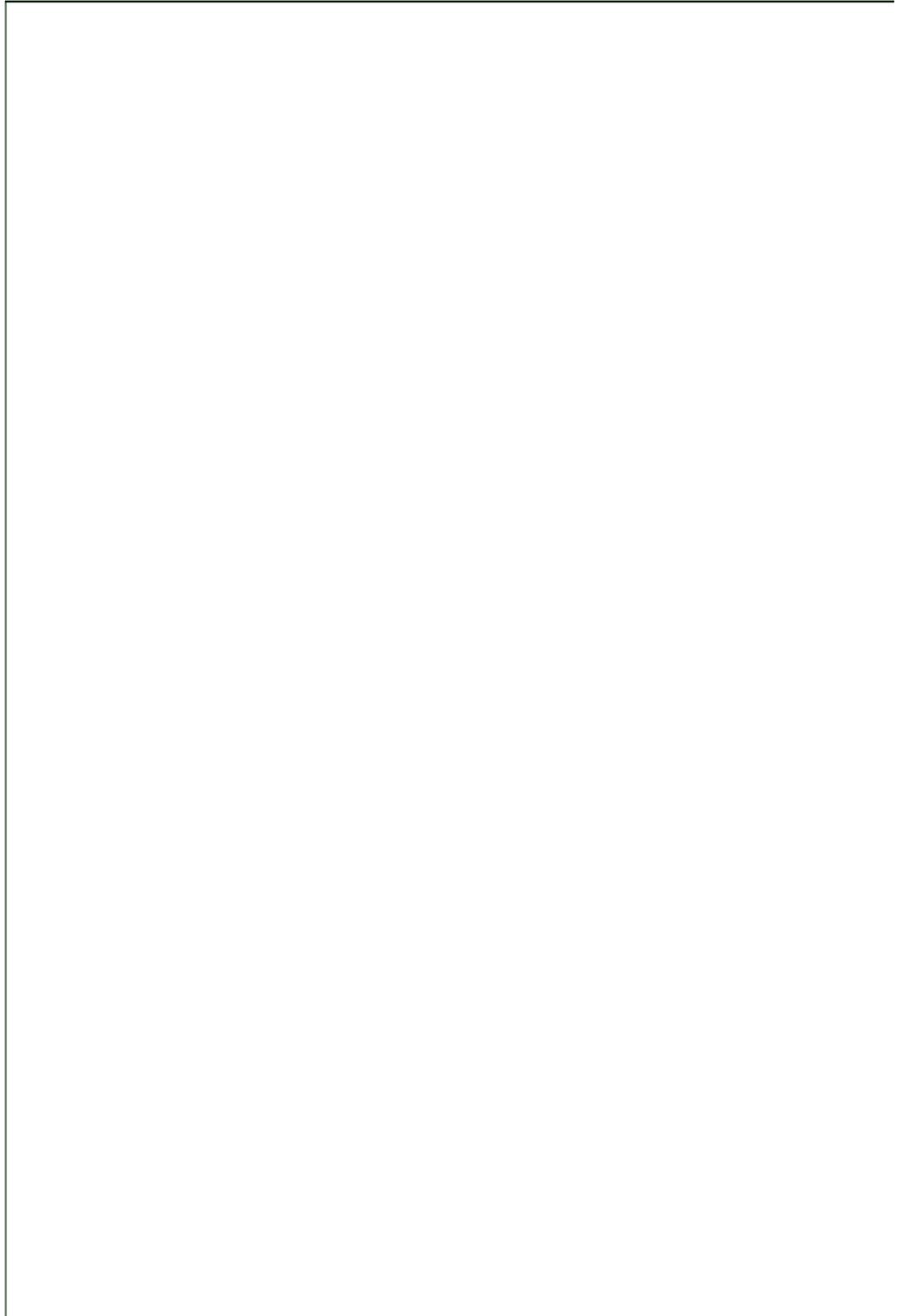
ISRF staff is available to meet with you to discuss your project.

APPLICATION PROCESS

ISRF uses a two-step Application Process —Preliminary Application and Financing Application. A simple Preliminary Application can be downloaded from the I-Bank website at: www.ibank.ca.gov or obtained at the address listed on the left hand column of this page. Applicants with successful Preliminary Applications will be invited to submit a Financing Application. The I-Bank's Board of Directors meets monthly to consider Financing Applications.

HOW TO APPLY

Preliminary Applications and Financing Applications are accepted on a continuous basis. Additional information may be obtained from the I-Bank's website or by contacting the Ibank office.



THE CALIFORNIA'S BORDER ENVIRONMENTAL COOPERATION COMMITTEE (CAL/BECC)



A FOCUS OF CAL/BECC IS THE TRANSFER OF TECHNOLOGY AND EXCHANGE OF INFORMATION AND TECHNICAL SERVICES BETWEEN THE CALIFORNIAS.





The Californias Border Environmental Cooperation Committee (Cal/BECC)

FOR INFORMATION CONTACT

Claudia Villacorta
Cal/BECC Coordinator

State Water Resources Control Board
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With the passage of the North American Free Trade Agreement (NAFTA), the governments of the United States and Mexico reached an agreement on binational mechanisms to facilitate border environmental cleanup and provide additional support for community adjustment and investment. This agreement ensures that the US and Mexico will work together to address the environmental problems that plague the border region between our two countries. The border region is defined as 100 kilometers north and south of the US-Mexico border.

As a result of the agreement, the Border Environment Cooperation Commission (BECC) and the North American Development Bank (NADBank) were created. BECC assists border states, local communities and private investors in coordinating, designing and financing environmental infrastructure projects with cross-border impact. The degree of local and public participation is unprecedented; including strong representation on the BECC's Board of Directors and Advisory Council.

NADBank is an international institution established by joint agreement solely between Mexico and the US. Each country has equal rights and obligations and contributed equally to the Bank's capital holdings. The Bank acts as an investment bank. Its lending policies are designed to assist in financing border environmental infrastructure projects as a complement to other public and private sources, including grants. NADBank can provide funding to public or private entities. It has the authority to provide financing through long-term loans and guarantees to bring together all available sources of funding.

WHAT IS THE CAL/BECC?

On July 22, 1994, at the 48th General Assembly of the Commission of the Californias, the Governors of California, Baja California and Baja California Sur, signed a Joint Resolution which amended their by-laws to create the Californias Environmental Cooperation Committee (Cal/BECC). Cal/BECC, an alliance between the three Californias, is charged with identifying mutually agreed upon environmental infrastructure needs along the California-Baja California border region, and seeking government and private sector funding for those projects. More specifically, Cal/BECC works to help border and tribal communities achieve certification from the Border Environment Cooperation Commission (BECC) and secure financial support from the North American Development Bank (NADBank).

COMPOSITION OF CAL/BECC

Cal/BECC has an eight member Board of Directors. Three are from California: Secretary for Environmental Protection, Secretary of Trade and Commerce and one public member from the Commission of the Californias. Three are from Baja California: The Secretary of Economic Development, Secretary of Human Settlements and Public Works and the Director of Ecology. The Secretary for Urban Development and Ecology and Secretary for Economic Development from Baja California Sur are the seventh and eighth member. The Chair is rotated annually between California and Baja California.

BORDER INFRASTRUCTURE NEEDS ASSESSMENT

Since its creation, Cal/BECC has embarked in the development of three California-Baja California Environmental Infrastructure Needs Assessment Reports. This report highlights California and Baja California environmental infrastructure needs and identify projects that can qualify for construction and technical assistance grants and loans from the BECC and the NADB and other financial institutions. We encourage you to participate in future efforts by contacting the Cal/BECC Coordinator.



La Comisión de Cooperación Ecológica Fronteriza de las Californias (Cal/BECC)

PARA INFORMACIÓN CONTACTE:

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Subdirector de Normatividad

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Con la aprobación del Tratado del Libre Comercio (TLC), los gobiernos de los Estados Unidos y México llegaron a un acuerdo binacional en establecer mecanismos para facilitar la limpieza del área Fronteriza y proveer apoyo para ayudar a las comunidades a ajustarse a los cambios traídos por el TLC y además promover inversión en si. Este acuerdo asegura que los Estados Unidos y México trabajaran juntos para contrarrestar los problemas ambientales existentes a lo largo de la region Fronteriza de los dos países. La región Fronteriza se define como la franja de 100 kilómetros al norte y al sur de la frontera.

A razón de éste acuerdo, fueron creadas la Comisión de Cooperación Ecológica Fronteriza (COCEF) y el Banco De Desarrollo de América del Norte (BANDAN). COCEF ayuda a los estados fronterizos, comunidades locales e inversiones privadas en coordinar, diseñar y financiar proyectos de infraestructura ambiental que tienen impacto en ambos lados de la frontera. La participación local y pública es sin precedentes; incluyendo una fuerte representación en la mesa directiva del COCEF y en su Consejo.

BANDAN es una institución internacional establecida por un acuerdo mutuo entre México y los EE.UU. Cada país tiene derechos y obligaciones equitativas, al igual que las contribuciones que conforman el capital bancario. El Banco actúa como un banco de inversión. Su política de apoyo financiero está diseñada para asistir en el financiamiento de proyectos de infraestructura ambiental complementando fuentes financieras existentes, ya sean públicas o privadas. Tiene la autoridad de proveer financiamiento a largo plazo y actuar en capacidad de aval. Esto se hace para reunir todas las posibles fuentes disponibles de financiamiento.

QUE ES CAL/BECC?

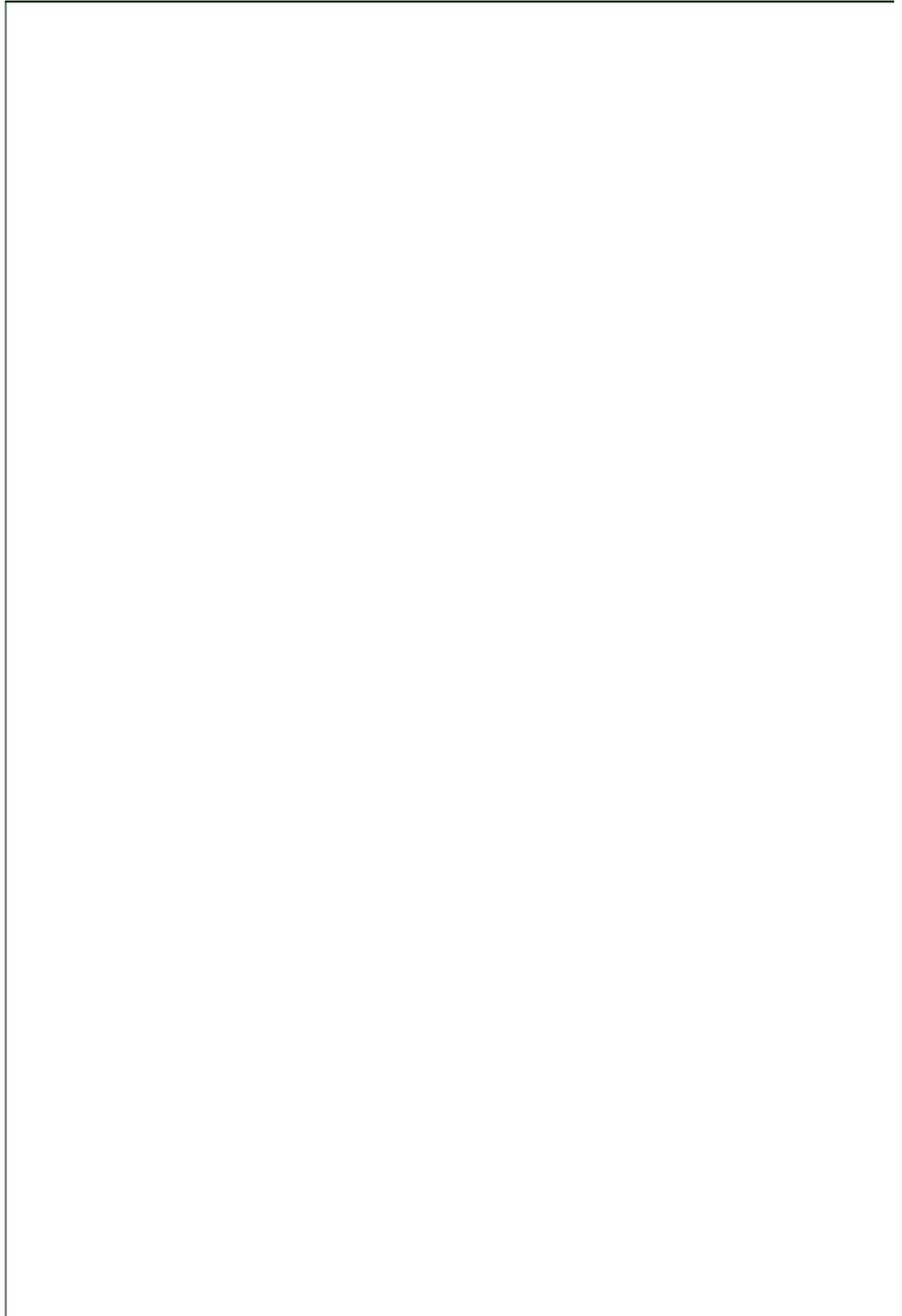
El 22 de julio de 1994, en la 48 Asamblea General de la Comisión de Las Californias (COMCAL), los Gobernadores de California, Baja California y Baja California Sur firmaron un acuerdo el cual enmendó los reglamentos para crear la Comisión de Cooperación Ecológica Fronteriza de las Californias (Cal/BECC). Cal/BECC es una alianza entre las tres Californias, que está encargada de identificar proyectos de infraestructura ambiental de un acuerdo mutuo a lo largo de la frontera California-Baja California y en asegurar fondos financieros gubernamentales o del sector privado para llevar a cabo éstos proyectos. Específicamente, Cal/BECC trabaja para asegurar la certificación del COCEF y el apoyo financiero del BANDAN.

CONSEJO DIRECTIVO DE CAL/BECC

Cal/BECC es encabezado por un Consejo Directivo de ocho miembros. Tres son de California: Secretario de Protección al Medio Ambiente, Secretario de Comercio y un miembro del público del COMCAL. Tres son de Baja California: Secretario de Desarrollo Económico, Secretario de Asentamientos Humanos y Obras Públicas, Director de la Dirección General de Ecología. Dos de Baja California Sur: Secretario de Desarrollo Urbano y Ecología y el Secretario de Desarrollo Económico de Baja California Sur. La presidencia es alternada anualmente entre California y Baja California.

DIAGNÓSTICO DE NECESIDADES EN INFRAESTRUCTURA ECOLÓGICA

Desde su creación, Cal/BECC ha emprendido el desarrollo de tres ediciones de un Reporte Diagnóstico de Necesidades en Infraestructura Ecológica. Este reporte identifica y pone en destaque los proyectos en Baja California y California con potencial para ser financiados de acuerdo a las directivas y prioridades de la COCEF y el BANDAN y otras instituciones financieras. Los invitamos a participar en futuros esfuerzos del Cal/BECC contactando al coordinador del Cal/BECC



DESERT ALLIANCE FOR COMMUNITY EMPOWERMENT (DACE)



THE MISSION OF DACE IS TO PROVIDE RESIDENTS AND THEIR COMMUNITIES WITH THE MEANS, RESOURCES AND OPPORTUNITIES ACHIEVE A SELF SUFFICIENT AND SUSTAINABLE QUALITY OF LIFE.



Desert Alliance for Community Empowerment

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Home Page: www.dcez.org

The Desert Alliance for Community Empowerment (DACE) is a non-profit organization that drives the Desert Communities Empowerment Zone (DCEZ) by focusing its energy to support and find solutions for its communities and partnering organizations. DACE's mission is to provide residents and their communities with the means, resources and opportunities to achieve a quality lifestyle that is self-sufficient and sustainable.

The DCEZ is a geographic area of nearly 4200 square miles. The DCEZ is only one of ten federally designated Rural Empowerment Zones in the United States. The Zone is bounded on the north by the San Bernardino County line, to the south by the Imperial County line, the Coachella Valley to the west, and the Colorado River to the east. The Zone crosses the jurisdictional boundaries of Riverside County; the cities of La Quinta, Indio, Coachella, and Blythe; and five (5) Indian Reservations - Cabazon, Augustine and Twenty-Nine Palms Bands of Mission Indians, the Torres-Martinez Desert Cahuilla Indians, and the Colorado River Indian Tribes. The Zone also includes a majority of Joshua Tree National Park as well as the northern portion of the Salton Sea. In addition, the Zone comprises eight (8) primary rural communities of Subzones; these communities are Desert Center, Colorado River-Lost Lake, as well as the USDA designated Colonia communities of Mecca, Thermal, North Shore, Ripley, Mesa Verde, and Oasis.

Facing severe social and economic conditions, in 1998 these rural communities developed a strategic plan to leverage federal funding to promote sustainable economic and community development, thus improving the quality of life for residents within the Empowerment Zone.

Through the strategic planning and community involvement process, DACE has identified fifteen issue areas from which all projects and programs stem. The issue areas are:

- Housing
- Transportation
- Public Safety
- Food/Security/Basic Needs
- Community Facilities
- Child Care
- Environment
- Education
- Health Care
- Economic Development
- Employment Training
- Communications/Information
- Social Services
- Infrastructure
- Recreation

The specific goals for the environment and infrastructure areas are:

Environment - provide residents with environmental education and encourage activities and programs that promote clean air, soil and water.

Infrastructure - development and implementation of plans to provide "back bone" main-line infrastructure systems (i.e. flood control, communications, streets, curbs and gutters, water and wastewater systems).

The intent of the Rural Empowerment Zone Program is to provide up to \$40 million in Federal funds to designated communities to enable them to successfully implement their Strategic Plans. These funds are considered "seed money" to be used to attract, leverage, and infuse substantial resources and funding from Federal, State and private sources.

For additional information, regarding DACE programs and services, please visit www.dcez.org or contact the DACE office.

NORTH AMERICAN DEVELOPMENT BANK



THE NEW LA ROSITA POWER PLANT IN MEXICALI, BC.



THE ALL-AMERICAN CANAL HYDRO-ELECTRIC PLANT NEAR ANDRADE, CA. AS A RESULT OF THE 2000 MANDATE EXPANSION, THE NADB CAN NOW FINANCE PROJECTS IN NEW SECTORS SUCH AS CLEAN AND EFFICIENT ENERGY.



North American Development Bank

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BACKGROUND

The North American Development Bank (NADB) is an international financial institution established and capitalized in equal parts by the United States and Mexico for the purpose of financing environmental infrastructure projects. All NADB-financed environmental projects must be certified by the Border Environment Cooperation Commission (BECC), be related to potable water supply, wastewater treatment or municipal solid waste management and be located within the border region.

The NADB's mission is to serve as a binational partner and catalyst in communities along the U.S.-Mexico border in order to enhance the affordability, financing, long-term development and effective operation of infrastructure that promotes a clean, healthy environment for the citizens of the region. As pioneer institutions in their field, the NADB and BECC are working to develop integrated, sustainable and fiscally responsible projects with broad community support in a framework of close cooperation and coordination between Mexico and the United States.

The U.S.-Mexico border region, in which the bank focuses its efforts, is defined in the Charter as the area within 100 kilometers (approximately 62 miles) north and south of the boundary between the United States and Mexico.

CAPITALIZATION

The authorized capital of NADB under the Charter totals US\$3 billion with equal commitments from the United States and Mexico. Each country has authorized the subscription of 150,000 shares of the bank's capital stock with a par value of US\$10,000 per share. Payments of capital by the two countries were initiated in 1994, with scheduled installments to be completed by September 30, 2006.

NADB CAPITAL STRUCTURE

Country	Paid-In Capital	Callable Capital	Total
United States	\$ 225,000,000	\$1,275,000,000	\$1,500,000,000
Mexico	225,000,000	1,275,000,000	1,500,000,000
Totals	\$ 450,000,000	\$2,550,000,000	\$3,000,000,000

Paid-In Capital and Callable Capital

Fifteen percent of the NADB's authorized capital (US\$450 million) is in the form of paid-in capital. Eighty-five percent of the NADB's authorized capital (US\$2.55 billion) is in the form of callable capital. To date, the NADB has received from the two countries a combined total of US\$348.750 million in paid-in capital and US\$1.976 billion in callable capital, representing 77.5% of its total subscribed capital.

Paid-in capital consists of actual cash funds contributed to the NADB by the two governments. Paid-in capital, once contributed, is actually held by the NADB and invested in short- to medium-term, high quality, fixed-income securities.

Callable capital does not represent actual cash funds contributed to the NADB by the two governments. It is composed of funds that are pledged to be provided to the NADB from the two countries only if required to meet the bank's obligations on borrowings of funds for inclusion in its capital resources.

Capital Utilization

Under the Charter, ninety percent of the NADB's authorized capital may be used to finance environmental infrastructure projects in the border region. Ten percent of the capital subscribed by each country has been allocated to finance community adjustment and investment throughout the United States and Mexico in support of the purposes of NAFTA.

ORGANIZATION

Board of Directors

The NADB has a binational Board of Directors consisting of six members: three from the United States and three from Mexico. The chairmanship of the board alternates between U.S. and Mexican representatives every year. The current chairman of the board is the United States Secretary of the Treasury.

United States

Secretary of the Treasury

Secretary of State

Administrator of the Environmental Protection Agency

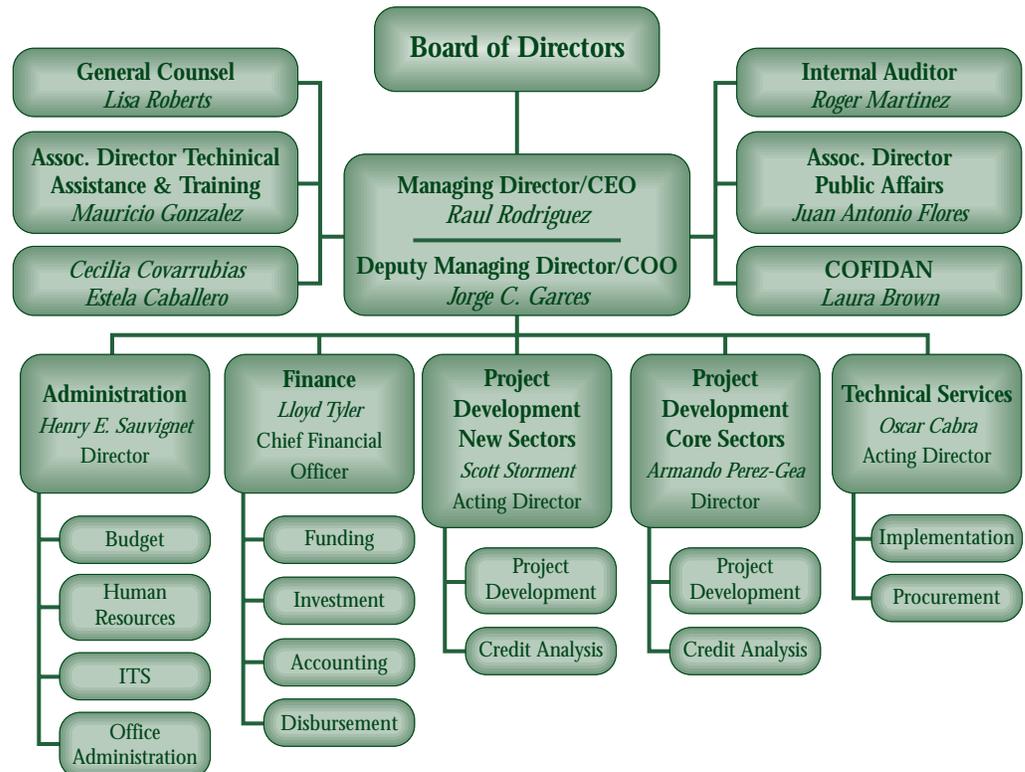
Mexico

Secretary of Finance and Public Credit

Secretary of Economy

Secretary of Social Development

All powers of the bank are vested in the Board of Directors, which determines bank policy within the framework of the Charter and bylaws, and approves all loan and credit proposals. All decisions of the Board require the assent of at least two representatives of each country. The Board holds an annual meeting and such other meetings as are necessary to the operations of the bank. A general diagram of the organizational structure of the bank is shown below.



LOAN & GUARANTY PROGRAM

The NADB loan program provides direct financing for infrastructure projects with a demonstrable and reasonable assurance of repayment when private sector financing is not available on reasonable terms and conditions on a timely basis. In other words, NADB loans are intended to fill financing gaps not covered by other funding sources.

The NADB guaranty program is designed to encourage the participation of private and public sector lenders in financing infrastructure projects by providing partial repayment protection against commercial risks for loans.

Under its charter, NADB is authorized to make or guarantee loans to both public and private sector borrowers, operating within the United States and Mexico. Any project, regardless of community size or project cost, is eligible for financing and other forms of assistance from NADB, if it meets all three of the following eligibility criteria:

- The project must be located within 100 kilometers (62 miles) of the international border between the United States and Mexico.
- The project must be certified by the Border Environment Cooperation Commission (BECC).
- The project must be an environmental infrastructure project involving:
 - potable water,
 - water pollution,
 - wastewater treatment,
 - municipal solid waste, or
 - related areas

In November 2000, the NADB Board of Directors approved a resolution authorizing the bank to finance other types of projects within its current charter, while maintaining water, wastewater, and municipal solid waste as a priority. Projects that may qualify as environmental infrastructure under the charter include, but are not limited to, air quality improvement, public transportation, clean and efficient energy, and municipal planning, development and water management. In addition, the Board defined "related matters" to include: industrial and hazardous waste projects, water conservation projects, water and wastewater hookups for housing, and recycling and waste reduction projects.

Through its Loan and Guaranty Program, NADB is prepared to finance a portion of the capital costs of a project. Eligible capital costs may include the acquisition of land and buildings; site preparation and development; system design, construction, rehabilitation, and improvements; and the procurement of necessary machinery and equipment.

For additional information regarding evaluation criteria, type of financing available, financing terms, market rate loans and other program policies and operational procedures, please visit NADB's website and click on "Programs and Services".

BORDER ENVIRONMENT INFRASTRUCTURE FUND (BEIF)

In an effort to make projects affordable, especially for the smallest and poorest communities, the NADB established the Border Environment Infrastructure Fund (BEIF). This fund is designed to receive and administer grants from other institutions that can be combined with loans and guaranties to facilitate project financing.

The United States Environmental Protection Agency (USEPA) has made grant contributions in the amount of US\$439 million. NADB administers these funds to support USEPA-approved projects. The eligibility criteria and potential uses for USEPA funds administered through the BEIF are outlined in the USEPA Section of this report.

The purpose of the BEIF is to make environmental infrastructure projects affordable for communities throughout the U.S.-Mexico border region by combining grant funds with loans or guaranties for projects that would otherwise be financially unfeasible.

A primary objective of the BEIF is to assist communities in the transition from highly subsidized projects to self-sustaining projects supported locally by user fees and other revenue. As a result, to access BEIF funds, projects sponsors must demonstrate local "buy-in" with the commitment of current revenues, capital reserves and/or debt at the municipal or utility level.

Only water and wastewater infrastructure projects located within 100 kilometers (62 miles) of the U.S.-Mexico border will be considered for funding. Eligibility is based on a set of project selection criteria as well as an assessment of a community's financial need (see USEPA Section of this report).

Priority will be given to projects with maximum funding from other sources and where BEIF funding is necessary to complete project financing. Preference will also be given to projects likely to have the most impact and ultimately benefit both sides of the border.

Assessment of Financial Need

BEIF funds are targeted at communities that could not otherwise afford to develop and execute necessary infrastructure. For each project, the NADB performs an analysis of the community's need for grant funds, its capacity to assume debt and, most importantly, the ability of its residents to afford the costs associated with the project and the system as a whole. Taking these factors into consideration, the NADB structures a financial package that ensures completion of a functional system at a cost affordable to the community. The amount of each award is based on this analysis and the availability of other sources of funding.

In order to determine project affordability, the NADB has developed an affordability protocol. The protocol explains the analysis utilized to apply USEPA affordability guidelines to water and wastewater projects on the US side of the border. The protocol, which is included in the USEPA section of this report, identifies eligibility criteria for transition and construction assistance.

For additional information regarding the BEIF, please visit NADB's website and click on "Programs and Services".

INSTITUTIONAL DEVELOPMENT PROGRAM (IDP)

The IDP assists public utilities in achieving effective and efficient operation of their water, wastewater treatment, municipal solid waste, and related services by reinforcing their institutional capacities, thus creating a stronger financial foundation that will support the development of future infrastructure.

The IDP is designed to complement and work with other development programs, including the Technical Assistance Program of the BECC.

Based on program objectives, special preference will be given to public utilities with viable projects that have failed to gain broader support due to institutional deficiencies. Priority will be given, in the following order, to eligible utilities that have:

1. a BECC-certified project and need institutional strengthening to facilitate financing; or
2. a Step I BECC certification application on file and need institutional strengthening to facilitate certification and financing; or
3. preliminary projects targeted at small, low-income communities and need institutional strengthening; or
4. a need for institutional strengthening, but do not have a specific project; or
5. a need for institutional strengthening to enhance privatization efforts.

Specific project priority will be reviewed in conjunction and cooperation with federal, state, and local authorities as well as with the BECC.

The IDP is a two-phase program. During the initial phase, the NADB can provide personnel and resources for an institutional development needs assessment, if necessary, of the eligible utility at no cost to the community. In the second phase, a plan of action based on the assessment results will be devised to address the needs of the utility. Resources may also be allocated to improve information and administrative systems, provide training and enhance other areas that have an impact on the financial structure of the utility.

In order to request IDP assistance, a project sponsor must complete and submit an IDP information sheet. This application can be obtained by visiting NADB's website and clicking on "Programs and Services".

PROJECT DEVELOPMENT PROGRAM (PDP)

The primary purpose of this technical assistance program is to help utilities in border communities with the planning and design of environmental infrastructure projects that will be submitted to the BECC for certification and to the NADB for financing.

To ensure efficient and coordinated development of these projects, this program is implemented in close consultation with the BECC.

PDP grant assistance may be used to help fund design and related studies needed for the proper development of infrastructure projects in any of the environmental sectors in which the NADB operates, including water conservation. Eligible studies and activities under this program include, but are not limited to:

- final design
- environmental assessments
- feasibility studies
- financial analyses
- preparation of BECC Step II documents
- master plans
- facility plans
- needs assessments
- geological studies
- solid waste production analyses

Public participation activities necessary for BECC certification may also be eligible for funding.

Grants may be awarded in amounts up to US\$200,000 per project. In the case of regional projects involving two or more communities, the grant limit per project may be increased to US\$300,000. Up to 50 percent of the cost of the development the project sponsor must contribute studies either in cash or in kind. The specific percentage will be determined by the NADB in each case based on the project sponsor's financial circumstances.

The project sponsor must submit a written request to the NADB for PDP assistance, describing the environmental infrastructure project under development and the type of assistance requested. The project sponsor will also be responsible for preparing the terms of reference of the study. The project sponsor or the BECC, as determined by the NADB, will manage the contract in accordance with the terms of reference approved by the NADB.

COMMUNITY ADJUSTMENT AND INVESTMENT PROGRAMS (CAIP)

As outlined in the agreement between the United States and Mexico that established the NADB, 10 percent of the bank's capital is designated for community adjustment and investment projects in the two countries. Each country has independently developed a program within this framework to address its specific needs. Unlike other programs of the NADB, the community adjustment and investment programs are not limited to projects located within the 100 km. border zone in each country.

The U.S. Community Adjustment and Investment Program (USCAIP) is designed to assist the private sector in creating new jobs and preserving existing jobs at risk of being lost in communities that have experienced the greatest difficulty in adjusting to disruptions of their economies attributable to NAFTA. The USCAIP has a loan and a grant program which are operated independently. To learn more about this program, please visit NADB's website and click on Programs and Services.

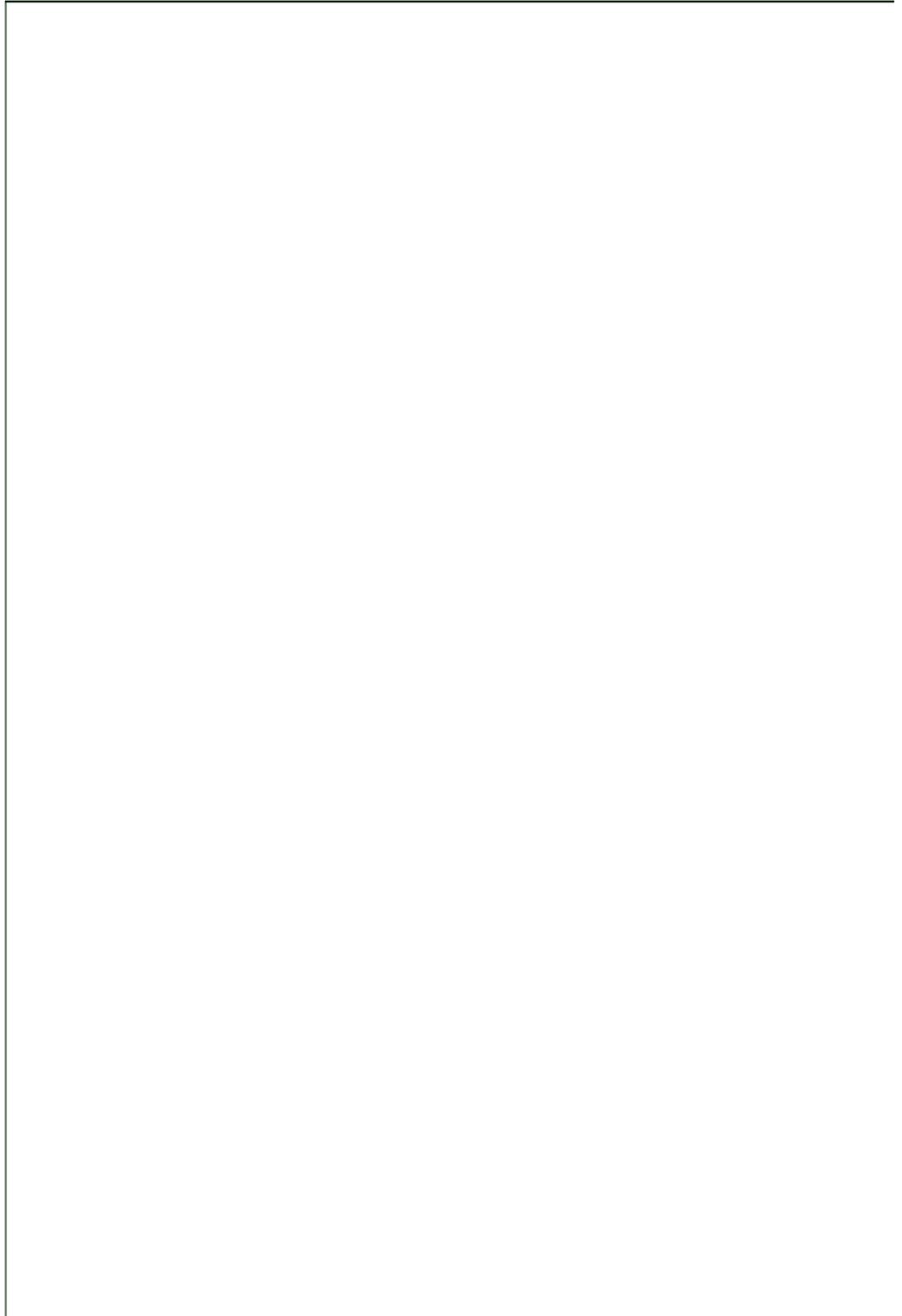
The Mexican program, entitled Programa Complementario de Apoyo a Comunidades y Empresas, is administered by the Mexican federal development bank, Banco Nacional de Obras y Servicios Públicos, S.N.C. (Banobras). The program is designed to support basic infrastructure development throughout Mexico, as well as help communities and businesses benefit from NAFTA.

To learn more about the Mexican program, contact the state office of Banobras in your area.

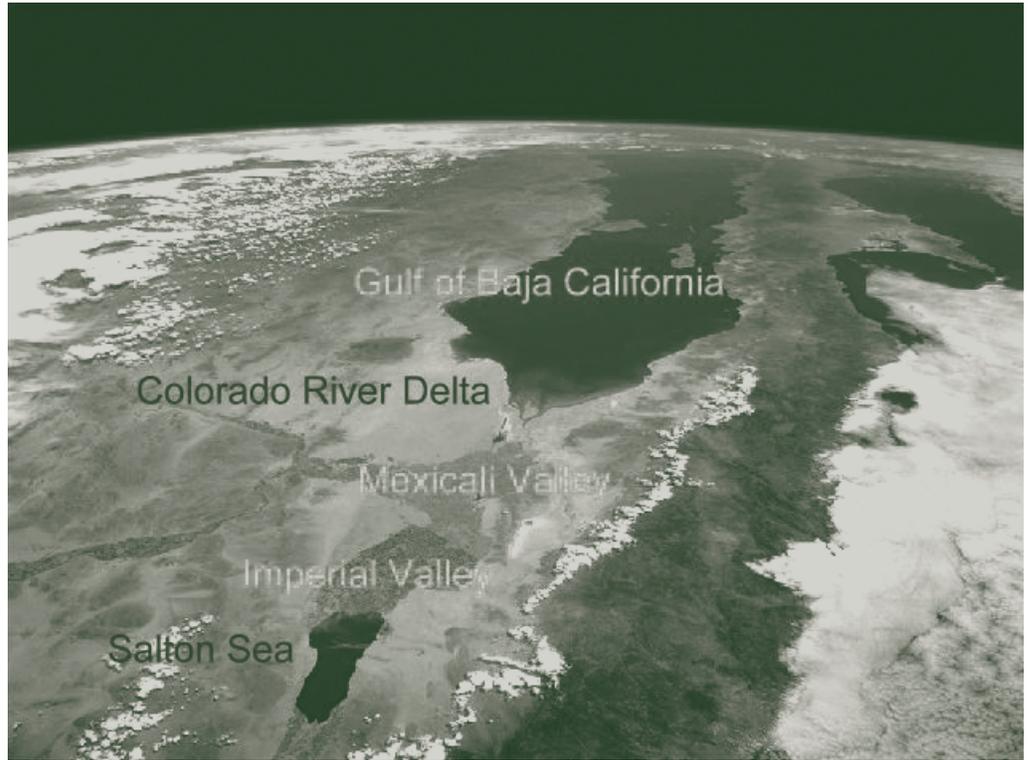
UTILITY MANAGEMENT INSTITUTE (UMI)

NADB created its Institutional Development Cooperation Program (IDP) for the purpose of enhancing the managerial, financial and leadership capabilities necessary to operate a successful utility in the modern U.S.-Mexico border economy. As an integral part of that effort, the Utility Management Institute (UMI) offers an on-going and focused professional development program for utility managers and their staffs in the border region.

The curriculum is highly practical, focusing on day-to-day issues faced by border utility professionals. Module presentations emphasize interaction among participants with the goal of developing a binational network of border utility professionals able to consult with one another as issues arise. Instruction is provided in both English and Spanish. For additional information including upcoming schedules of upcoming module presentations, please visit NADB's website and click on Programs and Services.



RURAL COMMUNITY ASSISTANCE CORPORATION





Rural Community Assistance Corporation

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HOW CAN WE ASSIST?

The Rural Community Assistance Program (RCAC) is a nonprofit organization dedicated to assisting rural communities achieve their goals and visions by providing training, technical assistance and access to resources. Along with their partners, RCAC provides five core services to rural communities throughout the West.

FIVE CORE SERVICES OF RCAC

Capacity Development- RCAC works with the community to assess needs, develop potential solutions and select and implement the best plan. RCAC works with local leaders to strengthen facilitation, public speaking, strategic thinking and advocacy skills.

Access to Resources- RCAC staff helps identify funding sources and assists with financial packaging and funding applications. Since 1988, the RCAC Loan Fund has provided suitable and innovative solutions to the financing needs of rural communities. RCAC successfully leverages funds from various sources for rural projects. Offering both long and short-term financing, RCAC is a major lender for affordable housing, community facilities and environmental infrastructure.

Technical Assistance- RCAC offers technical assistance to supplement local agency capabilities in tackling community development projects.

Training- RCAC provides practical, task-oriented training on a variety of management and technical subjects. Training might be given to staff of a single agency or delivered at a conference attended by many agencies.

Advocacy- RCAC helps strengthen the effectiveness and presence of local communities with state and federal agencies. When rural communities and programs join together to coordinate efforts and share expertise, they are a formidable voice for rural issues.

COMMUNITY DEVELOPMENT PROGRAM AREAS

Housing- Nonprofit housing developers call upon RCA for assistance in developing, financing and operating affordable housing programs. RCAC assists with project feasibility, funding applications, selection and purchase of sites, project design, construction management and housing management.

Finance- As a certified Community Development Financial Institution (CDFI), RCAC fills financing gaps and serves those traditionally neglected by conventional markets. RCAC offers a comprehensive array of products for development of affordable housing, environmental infrastructure and community facilities in rural communities.

Environmental- RCAC is one of the six members of the Rural Community Assistance Program (RCAP), one of the nation's oldest and most effective environmental networks. As part of this network, RCAC helps rural, small and tribal communities develop and maintain safe, affordable drinking water and wastewater systems and integrated solid waste services. RCAC provides educational material, training and technical assistance on such topics as utility operation and management, regulatory and compliance issues, maintenance, board responsibilities, project planning and financing.

RURAL COMMUNITY ASSISTANCE PROGRAM (RCAP)

RCAP's mission is to help rural people to improve the quality of life in their communities. The RCAP network includes field-based staff and delegate agencies working at the community level in all 50 states and Puerto Rico, six regional offices with multi-state service areas and a national office located in Washington, D.C. RCAP staff is experienced community development and leadership trainers, management and financial system specialists, engineers, certified water and wastewater facility operators, environmental and solid waste program managers, rural housing experts, and health care providers. Many are fluent in a number of languages and dialects. This diversity allows RCAP to field teams of expert technical assistance providers and trainers to meet the specific needs of each community in which it works.

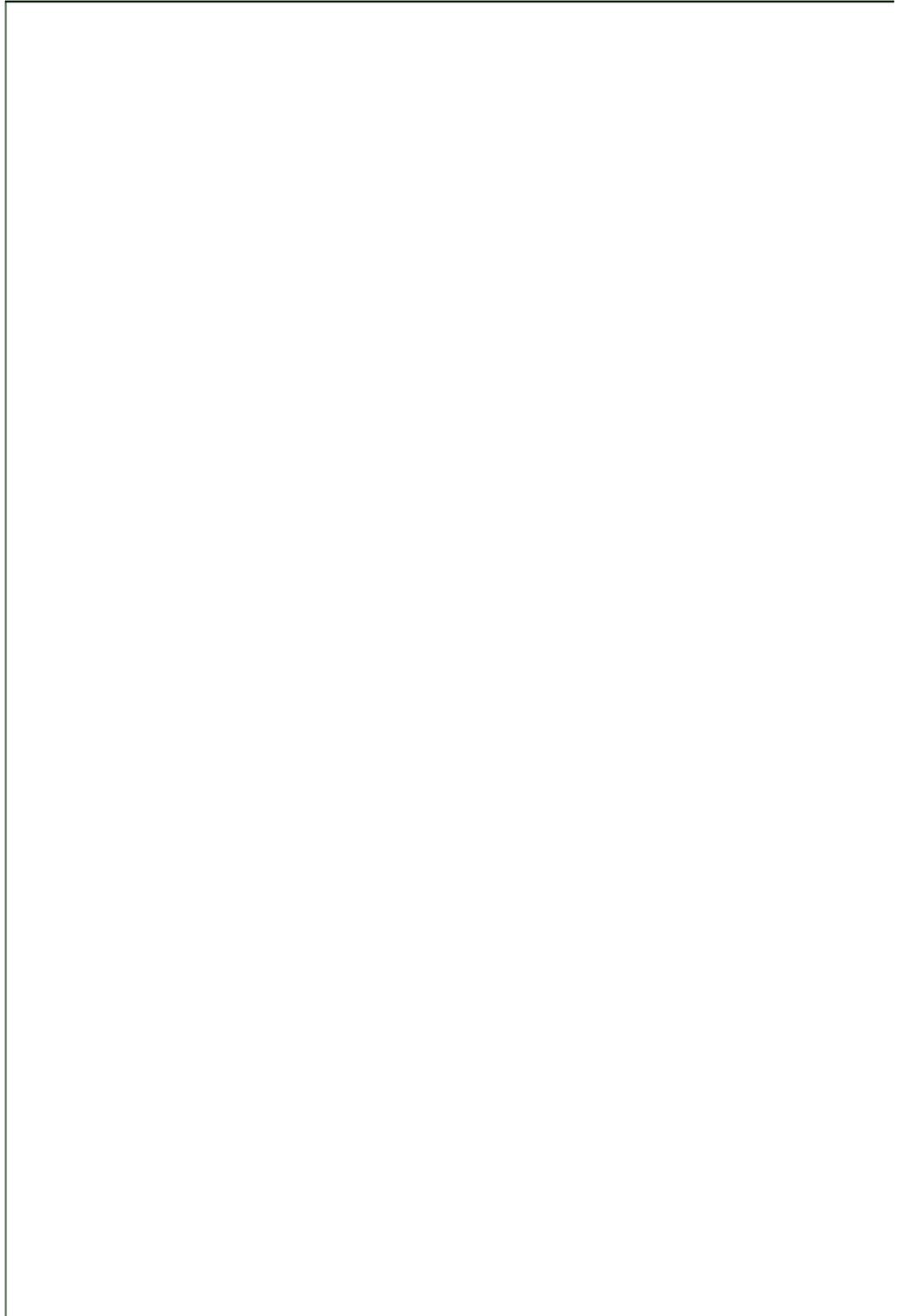
Rural communities or areas eligible for RCAP services are those with populations under 10,000. Most of RCAP's activities are carried out in rural areas with population of 2,000 or less, and in minority communities, underserved rural areas or rural areas with a high percentage of low-income individuals. RCAP's services are provided free of charge to these communities.

RCAP helps elected officials, utility owners and operators, community leaders and others living in rural communities to:

- access safe drinking water supplies;
- treat or properly dispose of wastewater;
- protect their groundwater supply and watersheds;
- plan and finance infrastructure projects;
- responsibly manage and operate community facilities;
- build leadership capacity in the community; understand state and federal environmental regulations and requirements; and
- develop a vision for the future in their communities.

With its roots firmly planted in rural America, RCAP is looking ahead. Over the next several years RCAP will continue to expand its current services to meet the growing demand for assistance, and will increase RCAP activities in rural housing, intermediary relending programs and economic development.

For additional and more detailed information regarding RCAC programs and services, please contact RCAC office or visit www.rcac.org.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)



SAN ANTONIO DE LOS BUENOS WASTEWATER TREATMENT PLANT IN TIJUANA, BC. REHABILITATION AND EXPANSION OF THE PLANT IS BEING FUNDED THROUGH A GRANT AND LOAN FROM THE NADB.



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The U.S. Environmental Protection Agency (EPA) actively promotes the sustainable development of border infrastructure in California-Baja California. Specifically, EPA supports *water and wastewater projects* through the Border Environmental Cooperation Committee's (BECC) *Project Development Assistance Program* (PDAP) and the North American Development Bank's (NADB) *Border Environment Infrastructure Fund* (BEIF).

From fiscal year 1996 to fiscal year 2003, the U.S. Congress appropriated to EPA \$575 million for border water and wastewater infrastructure. EPA distributed these funds among the NADB's BEIF, BECC's PDAP, EPA's Border Tribal Program and Congressionally-mandated Special Projects.

EPA utilizes BECC and NADB for disbursement of border infrastructure grants because the two organizations provide a forum for developing environmentally sensitive, financially feasible infrastructure projects. A shared long-term objective of EPA, NADB, and BECC is the development of self-sustaining water and wastewater systems.

PROJECT DEVELOPMENT ASSISTANCE PROGRAM (PDAP)

EPA has awarded BECC \$36million in grants to encourage the sound development of water and wastewater projects on both sides of the US-Mexico border through the PDAP. To access PDAP grant funds, the project sponsor must demonstrate a need for technical assistance and be eligible for BEIF assistance. EPA is involved in the disbursement of these funds only when the contract amount exceeds \$500,000. BECC must submit quarterly and annual financial reports for review.

BORDER ENVIRONMENT INFRASTRUCTURE FUND (BEIF)

Under a cooperative agreement with NADB, EPA has made \$439 million in grants available to the BEIF. NADB administers these funds to support EPA-approved water and wastewater projects. These grants are intended to supplement funding from other sources in order to complete a project's financial package. BEIF funds are available only after all other financing options have been expended. EPA has developed the following project selection criteria for BEIF funds:

- (1) A project must address a priority human health or ecological issues. Projects with the most impact will receive priority.
- (2) A project must have U.S.-side benefits. Projects with benefits on both sides will receive priority.
- (3) A project must be BECC-certified.
- (4) Projects must have maximum funding from other sources and need BEIF funds only to complete their financing.
- (5) Adequate planning, operations and management, and pretreatment provisions are prerequisites.

- (6) Only community/municipal infrastructure is eligible.
- (7) For drinking water, only drinking water quality projects are eligible (i.e. treatment plants and distribution systems). Raw water supply projects are excluded.
- (8) If there is a direct or indirect discharge to U.S. waters, a project must target U.S. water quality norms. Projects can be phased to achieve these targets. Flow reductions must not threaten U.S. or shared ecosystems.
- (9) To be eligible for funding to serve colonias, county or municipal governments must have enforceable local ordinances or zoning rules that prevent:
 - the development or construction of any additional colonia areas, and
 - the construction, within an existing colonia, of any new home, business or other structure that lacks water, wastewater, or other necessary infrastructure.

NADB has developed an affordability protocol based on EPA's affordability guidelines for BEIF assistance. The protocol, which is included in this section, identifies eligibility criteria for transition and construction assistance. BEIF assistance is possible only if a project's financial burden exceeds the users' ability to pay.

Using the project selection criteria and affordability guidelines, NADB will formulate a proposal with the appropriate mix of assistance. NADB will submit the proposal with an affordability analysis and a sensitivity analysis to EPA. EPA retains final approval as to which projects will be funded. EPA provides NADB with a written response for each proposal. Upon receipt of EPA's final decision, the Bank provides written notice of such decision to the project sponsor and copies to EPA, the respective state and the community.

EPA is developing a ranking system to prioritize BEIF-eligible projects for funding. The proposed system will consider the seriousness of the environmental and human health impact being addressed by the project.

Because the disbursement of EPA funding is considered a federal activity, National Environmental Protection Act (NEPA) process must be completed prior to the disbursement of PDAP or BEIF funds for final design and construction. EPA has been involved in the development of NEPA documents, which disclose impacts in the U.S. from Mexican projects. Environmental assessments developed for BECC certification include trans-boundary impacts. EPA is responsible for ensuring the analyses of these impacts comply with its NEPA requirements.

NADB is responsible for oversight of construction and operation of the water and wastewater facilities funded with BEIF funds.

BORDER TRIBAL PROGRAM

Since 1996, EPA has reserved \$28.4 million to build drinking water and wastewater treatment infrastructure on Indian Nations and other tribal lands in the U.S. This program provides direct grants to the Indian Health Service or appropriate tribal organization. EPA Region IX (San Francisco office) manages this program.

The following are the funding criteria that apply to the Border Tribal Program.

- (1) Funds may be used for planning, design and construction of drinking water and wastewater infrastructure improvements. Drinking water projects must address water quality issues, not supply (quantity) issues.
- (2) A project must address an existing public health or water quality problem. Emphasis will be given to residential domestic problems.
- (3) Adequate provision for long-term operation and maintenance of systems is a prerequisite.
- (4) A project must be substantially completed within 3 years.
- (5) A project with trans-boundary (U.S. and Mexico) impacts must be BECC certified.
- (6) The funding requested must be sufficient to adequately finance the project.
- (7) The Tribal Chairman must submit the project descriptions.
- (8) A project must be located within 100 kilometers (approximately 62 miles) of the U.S.-Mexico border. (As mentioned above this program is for projects on Indian reservations and tribal lands in the U.S.)

OTHER EPA BORDER ACTIVITIES

EPA participates in Border 2012, a binational program that coordinates activities of the U.S. and Mexican federal entities responsible for the border environment. Border 2012 (2002-2012), with a ten-year outlook, is subsequent to the five-year Border XXI program (1995-2000) I, with changes in organizational structure that reflect an increasing role for regional and local participants. Border 2012 organization includes border-wide Policy Forums, Regional Work Groups and local Task Forces. To convene as a task force, a group must be working to meet a Border 2012 goal and/or objective, fulfill certain organizational criteria, and apply for approval to the appropriate Regional Work Group. Two Water task forces have been approved for California/Baja California: Lower Colorado River Basin (including Arizona/Sonora/Baja California/California) and Tijuana/San Diego. For additional information regarding the Border 2012 program visit www.epa.gov/usmexicoborder.

PROTOCOL FOR APPLICATION OF EPA AFFORDABILITY GUIDELINES
TO U.S. WATER AND WASTEWATER PROJECTS UNDER THE

BORDER ENVIRONMENT INFRASTRUCTURE FUND (BEIF)



This protocol is updated periodically based on experience in applying it to diverse projects.
Any changes must be approved by EPA.

2nd edition - December 2003

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INTRODUCTION

PROTOCOL

This protocol was developed by the North American Development Bank (Bank) to explain the analysis used to apply United States Environmental Protection Agency (EPA) affordability guidelines to water and wastewater projects on the U.S.-Mexico border seeking grant assistance from the Border Environment Infrastructure Fund (BEIF). This protocol is directed to projects in the United States. EPA's affordability guidelines were issued by memorandum dated March 28, 1997, under the signature of Robert Perciasepe, Assistant Administrator, and are included in this document.

THE BEIF AND ITS PURPOSE

THE BORDER ENVIRONMENT INFRASTRUCTURE FUND

The Bank has established a Border Environment Infrastructure Fund to administer nonreimbursable resources for environmental infrastructure projects in the U.S.-Mexico border region. Pursuant to a Cooperative Agreement (Agreement) with EPA, EPA will make funds available to the BEIF and will allow those funds to be used to support EPA-approved projects in accordance with the terms and conditions specified in the Agreement. The Infrastructure Fund may be used for projects on both sides of the United States-Mexico border located within 100 km of the international boundary. To the extent that projects are financially assisted by any Mexican institution on the Mexican side of the border, or by state-sponsored programs on the U.S. side of the border, consultation with and support from the concerned agency or organization will be a critical factor in obtaining EPA agreement to proceed with grant support of a specific project. In all cases the EPA will make the final decision to provide grant assistance.

PURPOSES OF THE BEIF

The goals of the BEIF are to:

1. Facilitate the expansion and improvement of water and wastewater environmental infrastructure in the United States-Mexico border region by providing coordinated financial support for the construction of projects and related activities.
2. Improve cooperation and coordination and assure the efficient flow of funds and the fiduciary soundness of financial management practices among all private and public sector parties with respect to financial support provided by those parties for constructing environmental infrastructure in the U.S.-Mexico border region, particularly with respect to financial cooperation among the Bank, EPA and CNA.
3. When appropriate, the BEIF will work in tandem with the Bank's Cooperative Credit Program, which, in conjunction with existing state and local programs, provides loan and loan guaranty support to small border communities that need environmental infrastructure improvements.

AUTHORIZED USE OF BEIF FUNDS

In order to make such projects affordable to the relevant community, EPA funds may be used in conjunction with grants and loans from other sources for the final design and construction of water and wastewater projects. A project may receive both transition and construction grant assistance from the BEIF.

1. Transition assistance may be used to ease a community's adjustment to higher user fees over time by providing capitalized interest funds over a 5 to 7-year period; or to foster regionalization by providing funds to support the debt service costs of regional plants as service levels reach targeted demand in neighboring communities.
2. Construction assistance may be used to pay final design and construction costs which are not funded by other sources,

BASIC REQUIREMENTS FOR U.S. PROJECTS

To be eligible for consideration for BEIF grant assistance, projects must meet EPA project selection criteria (see Appendix A), including associated affordability guidelines (see Appendix B). These guidelines include an eligibility benchmark that is explained below.

AFFORDABILITY AND THE ELIGIBILITY BENCHMARK

Affordability is a measure of a community's ability to pay the cost of water and wastewater infrastructure. Although other factors may be taken into consideration, the fundamental determinant of affordability is the ratio of cost per household to median household income (CPH/MHI). These terms and the method used to calculate them are explained below. The EPA uses a CPH/MHI benchmark of 1.7% to determine eligibility for construction grant funds under the BEIF. This is referred to as the Eligibility Benchmark. The EPA and the Bank expect communities to pay all project costs up to the point that CPH/MHI equals 1.7%. Projects with costs in excess of those that produce a CPH/MHI of 1.7% are ELIGIBLE for consideration of construction grant assistance from the BEIF. If a project requires rate increases related to debt service of 5% or more per year, the project is ELIGIBLE for transition grant assistance from the BEIF. A CPH/MHI in excess of 1.7% or rate increases related to debt service of 5% or more per year neither guarantee a commitment by EPA to provide any grant funds, nor signify a specific level of grant funding.

All funding decisions will be made on a project-by-project basis.

BECC FINANCIAL FEASIBILITY CRITERION

To receive BEIF grant assistance, a project must be certified by the Border Environment Cooperation Commission (BECC). An essential criterion that must be met for BECC certification is financial feasibility and project management. Financial Feasibility is a determination of whether or not revenues are sufficient to cover debt service and operations and maintenance (O&M) costs.

Financial Feasibility is different than Affordability. Affordability is a determination of whether debt service and O&M costs of a project when added to existing debt service and O&M result in a cost per household greater than 1.7% of median household income. This determination is made by the Bank and is required to be eligible for grant assistance from the BEIF.

METHOD OF ANALYSIS

The Bank will use the following method to determine project affordability and make recommendations of BEIF grant assistance:

CALCULATIONS TO DETERMINE PROJECT AFFORDABILITY

The project sponsor must provide a seven-year financial statement projection for its existing water and/or wastewater system. This must include a revenue and expense statement (income statement or profit and loss statement is also acceptable). This projection must show all revenue sources and all expenses including all operations and maintenance expenses as well as debt service (principal and interest). Balance sheet and cash flow statements are also requested.

The project sponsor must also provide a seven-year financial statement projection for the proposed project. This projection must show revenue generated by the project and related expenses including all operations and maintenance expenses as well as project-related debt service (principal and interest). For projection purposes, debt contracted for the project must be amortized over the useful life of the project or twenty-five years, whichever is lesser. Debt may include capitalized interest for the project construction period.

The seven-year projections of the existing system and the proposed project may be presented in one combined projection provided that the revenue and expense components of each are clearly identified. If consultant services are needed to assist in preparation of these projections, the Project Sponsor may apply to the BECC's Project Development Assistance Program to receive consideration for grant assistance.

All projections must be made in constant values (i.e. no inflation).

Projections should be made based on the project sponsor's fiscal year and the starting and ending date of the fiscal year should be specified. The project sponsor is responsible for the projections.

RATE INCREASES

The projections must indicate rates charged and any rate increases that may be required in order for cash flow from the existing system and the proposed project to be sufficient to meet debt service, O&M expenses, debt service and O&M reserve requirements, equipment replacement requirements, and debt coverage ratio requirements.

Projects that provide first time service and do not have a rate history will be analyzed on a case-by-case basis in order to determine eligibility for BEIF transition grant assistance. The cost of the alternative means for delivery of water and wastewater service currently in use will be taken into consideration.

COST PER HOUSEHOLD ("CPH") CALCULATION

Cost per household is calculated by dividing the sum of O&M and debt service costs attributable to household users by the number of households in the service area. O&M is calculated by adding the projected O&M of the existing system to the projected O&M of the proposed project. Debt service is calculated by adding the projected debt service of the existing system to the projected debt service of the proposed project. The amount of O&M and debt service attributable to household users is determined by multiplying the total amount of O&M and debt service by the percentage of the volume of water consumed by household users of the total volume of water billed to all users (household, commercial, industrial and governmental).

The O&M and debt service costs for both water and wastewater should be used in the CPH calculation.

The number of households is determined from the most recently available U.S. Census. In most cases, the most recently available U.S. Census data is from the 1990 Census that shows the number of

households in 1989. The Bank will inflate this number by the historical five-year compound annual growth rate (CAGR) of the population of the service area. The U.S. Census Bureau definition of households ‘...includes the related family members and all unrelated persons,... A person living alone in a housing unit, or a group of unrelated persons sharing a housing unit as partners...’. The count of households excludes group quarters. This definition may vary from that used by many state agencies. For the purpose of calculating CPH, depreciation is not included as a cost.

MEDIAN HOUSEHOLD INCOME (“MHI”) CALCULATION

Median Household Income is calculated by taking the MHI from the most recently available U.S. Census and inflating it with the Consumer Price Index (“CPI”) available from the U.S. Bureau of Labor Statistics. The CPI most representative of the service area should be used. If available, the local CPI should be used. If a local CPI is not available, then the CPI of the next largest area or region shall be used.

PROJECT SCOPE

Grant assistance may be provided for stand-alone projects or projects that are part of a master plan or larger capital improvement program; however, the Bank strongly encourages projects to be part of a long-term master plan. In either case, the affordability analysis takes the financial projections of the existing system and adds the debt service and O&M costs of the proposed project. If grant assistance is requested for a project that is part of a larger capital improvement program, the project cost must be isolated from the cost of other components of the capital improvement program.

SERVICE AREA

Grant assistance is intended to benefit rate payers in the area that the project is designed to service. Provided that the project is within 100 kilometers of the U.S.-Mexico border, the physical location of a water or wastewater plant in the border city or community is not taken into consideration in the analysis.

UNAVAILABLE DATA

The Bank recognizes that data is unavailable or inadequate for some border communities. On a case-by-case basis, the Bank will determine alternative, objective sources of data that may be accepted to perform the affordability calculations.

RESULTS OF CALCULATIONS

If the calculations result in a cost per household greater than 1.7% of median household income, the project is ELIGIBLE for construction grant assistance from the BEIF. If a project requires rate increases related to debt service of 5% or more per year, the project is ELIGIBLE for transition grant assistance from the BEIF.

The purpose of grant assistance from the BEIF is to make high-priority water and wastewater projects affordable. The CPH/MHI measure of 1.7% is only used to determine eligibility and a project is deemed eligible if the CPH/MHI is in excess of 1.7% in any year of the 7-year projection. Project sponsors are expected to pay at least the debt service and O&M cost that result in a CPH/MHI of 1.7%. It is not intended for BEIF grant assistance to bring a project sponsor’s CPH/MHI down to 1.7%.

GLOSSARY OF TERMS

Affordability

A measure of a community's ability to pay the cost of water and wastewater infrastructure.

Consumer Price Index (CPI)

An index of prices used to measure the change in the price of basic goods and services in comparison to a fixed base period. The CPI is prepared by the U.S. Bureau of Labor Statistics.

Cost per Household

The average of operations and maintenance and debt service costs attributable to a single household in a service area.

Debt Service

On-going principal and interest payments.

Financial Statements

Audited income statement, balance sheet and cash flow statement.

Household

The person or people occupying a housing unit.

Median Income*

The amount which divides the income distribution into two equal groups, half having incomes above the median, half having incomes below the median. The medians for households, families, and unrelated individuals are based on all households, families, and unrelated individuals. The medians for persons are based on persons 15 years old and over with income.

Operations and Maintenance Expenses (O&M)

On-going expenses required for the efficient operation of a water or wastewater utility.

Regionalization

The provision of water and wastewater services to a service area beyond a single community.

Service Area

The area that includes rate payers whose rates will be affected by the project seeking BEIF grant assistance.

*U.S. CENSUS BUREAU

DETERMINATION OF GRANT ASSISTANCE

The Bank will determine basic eligibility for grant assistance utilizing the affordability analysis stated in this protocol and EPA's project selection criteria shown in Appendix A. Based on this initial determination of eligibility, the Bank shall be responsible for formulating proposals with respect to the appropriate mix of funds for transition and construction assistance, and shall present such proposals to EPA for its approval with an affordability analysis and sensitivity analysis.

The amount of grant assistance will vary on a project-by-project basis considering secondary factors such as the current debt burden of the project sponsor, the other sources of funding available, available grant resources, the ability of the project sponsor to assume debt to finance the project, and key socioeconomic indicators such as high unemployment in the service area. Consideration will be given to the rate structure resulting from the project compared to average regional rates.

Projects that can benefit from regionalization of facilities or services should not be adversely affected in terms of the priority, amount, or type of grant funding as a result of selecting a regional alternative.

EPA will provide the Bank with written response to each financing proposal. Projects that are approved for financing from the BEIF will include a specific financial commitment to that project. The decision will be based on the "deal sheet" setting forth the Bank's complete analysis of the project and addressing both EPA's project selection criteria and the Bank's Loan and Guaranty Policies and Operational Procedures. In all cases, the EPA makes the final decision to provide the Bank's BEIF grant assistance.

Upon receipt of EPA's final decision, the Bank will provide the Project Sponsor with written notice of such decision. Copies of that notice shall be provided to EPA, the associated state and community (if other than the Project Sponsor).

CHECKLIST OF INFORMATION REQUIRED FOR AFFORDABILITY ANALYSIS

1. Seven-year cash flow projection of existing water and wastewater system that takes into consideration O&M expenses and debt service for existing system.
2. Seven-year cash flow projection of proposed project that takes into consideration O&M expenses and debt service for the proposed project.
3. Number of households in service area. Use U.S. Census Bureau definition of "Household".
4. Consumer Price Index for the service area for 1990-1996.
5. Water and wastewater volume by user type (commercial, industrial, residential, governmental)
6. Capital improvement program with all project descriptions and estimated costs. If any projects are in process, include amount spent to date and approximate percentage of completion.
7. Any additional documentation that would create an accurate and complete picture of the project sponsor's financial capability.

AFFORDABILITY ANALYSIS FOR ANY BORDER CITY, ANY BORDER STATE

		1	2	3	4	5	6	7
	Census 1990	Fiscal Year 1998	Fiscal Year 1999	Fiscal Year 2000	Fiscal Year 2001	Fiscal Year 2002	Fiscal Year 2003	Fiscal Year 2004
O&M Existing Water System ¹		20,000,000	20,500,000	21,000,000	21,500,000	22,000,000	22,500,000	23,000,000
O&M Existing Wastewater System ¹		28,600,000	29,000,000	29,600,000	30,200,000	30,700,000	31,500,000	32,100,000
O&M New Project ³		10,000,000	10,250,000	10,500,000	10,750,000	11,000,000	11,250,000	11,500,000
Debt Service Existing Water System ¹		7,000,000	7,200,000	7,400,000	7,600,000	7,800,000	8,000,000	8,200,000
Debt Service Existing Wastewater System ¹		10,000,000	10,300,000	10,600,000	10,900,000	11,200,000	11,500,000	11,800,000
Additional Debt Service New Project ³		4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Cash Expenses for Current Operations		79,600,000	81,250,000	83,100,000	84,950,000	86,700,000	88,750,000	90,600,000
Household Water Usage (gd) ¹		50,000,000	51,000,000	52,500,000	54,000,000	55,500,000	57,000,000	59,000,000
Commercial Water Usage (gd) ¹		8,000,000	8,150,000	8,300,000	8,450,000	8,600,000	8,750,000	8,900,000
Industrial Water Usage (gd) ¹		5,000,000	5,050,505	5,105,105	5,205,206	5,305,305	5,405,405	5,505,505
Governmental Water Usage (gd) ¹		20,000,000	20,200,000	20,500,000	20,700,000	21,000,000	21,350,000	21,500,000
Percentage of Cash Expenses Attributable to Households		60.24%	60.43%	60.76%	61.12%	61.39%	61.62%	61.17%
Number of Households ⁴	90,000	102,905	104,449	106,015	107,606	109,2205	110,8585	112,521
Annual Cost Per Household (CPH)		\$ 465.98	\$ 470.05	\$ 476.27	\$ 482.49	\$ 487.32	\$ 493.30	\$ 500.56
Any Border City Median Household Income (MH) ⁵	\$ 20,000	\$ 25,600	\$ 26,022	\$ 26,451	\$ 26,887	\$ 27,330	\$ 27,781	\$ 28,239
CPH as a Percentage of Any Border City MHI		1.82%	1.81%	1.80%	1.79%	1.78%	1.78%	1.77%
Benchmark		1.70%	1.70%	1.70%	1.70%	1.70%	1.70%	1.70%

¹ Any Border City Waterworks 7-Year Financial Plan

² Book, Eng & Billings Consulting Engineers, Inc. Project Forecast for Any Border City

³ Raitts & Markups Financial Advisors

⁴ 1990 U.S. Census Data. Population inflated by CAGR of 1.5% per year 1989-1998.

⁵ 1990 U.S. Census Data. MHI inflated by local CPI of 28% from 1989 through 1998 and then inflated by estimated CPI of 1.65% per year for 1999-2004.

EPA PROJECT SELECTION CRITERIA

- (1) Projects must address priority human health and/or ecological issues. Priority will be given to those projects likely to have the most impact.
- (2) Projects must have U.S.-side benefits. Priority will be given to those projects with benefits on both sides of the border.
- (3) BECC-certified projects only will be selected.
- (4) Priority will be given to projects with maximum funding from other sources and where program funding is necessary to complete financing of the project.
- (5) Adequate planning, operations and maintenance and pretreatment provisions are prerequisites.
- (6) Community/municipal infrastructure only will be selected.
- (7) For drinking water projects, drinking water quality projects only are eligible, not raw water supply. Therefore, only drinking water treatment plants and treated water distribution systems will be covered.
- (8) Projects where the discharge is directly or indirectly to U.S.-side waters, must target achievement of U.S. norms for ambient water quality in U.S.—side waters, although infrastructure development may be phased over time. Any flow reductions that result from implementation of non-discharging alternatives must not threaten U.S. or shared ecosystems.
- (9) To be eligible for funding to serve colonias, county or municipal governments must have enforceable local ordinances or zoning rules that prevent:
 - the development or construction of any additional colonia areas, and
 - the construction, within an existing colonia, of any new homes, business or other structure that lack water, wastewater, or other necessary infrastructure.

EPA'S AFFORDABILITY GUIDELINES

MEMORANDUM

SUBJECT: Border Infrastructure Grants Program Project Affordability Guidelines

FROM: Robert Perciasepe, Assistant Administrator

TO: Regional Administrators Region IX and Region VI

My memorandum of September 12, 1996, established the eight Project Selection Criteria the Environmental Protection Agency (EPA) will use in determining which eligible border area projects will have the highest priority for EPA grants. One specific criterion (the affordability criterion) states that priority will be given to projects with maximum funding from other sources and where program funding is necessary to complete financing of the project. We have received several requests that we further refine this specific criterion to provide a clear statement of which projects have highest priority based on the ability of the project sponsor to obtain financing from other sources and the effect of grant funding on the affordability of the project to the ultimate users. This memorandum clarifies and further elaborates the affordability criterion for grant funding.

The basic concept is that grant funds be applied toward projects where the value of the grant funds has the greatest marginal benefit. In general, the marginal benefit is increased when the grant funds are used in tandem with other financial resources and when the assistance is targeted toward project costs that are above what could normally be financed by the project sponsor's sources of credit. Furthermore, grant funding is very important when the costs to the ultimate users (rate payers) from the use of credit mechanisms result in rate increases that are not sustainable or realistic.

THE POLICY

Funding priority will be given to eligible water and wastewater projects where grant funding is essential to make facilities affordable to their ultimate users. This broad statement of policy applies to projects on either side of the border.

The implementation of this policy should be tailored to accommodate the differences in the U.S. and Mexico regarding governmental organizations, institutional relationships and responsibilities, financial instruments and information required to support project financing.

THE PROCESS

For projects on either side of the border the process involves the following:

1. Before obtaining a formal financial commitment from EPA for construction funding, the project sponsor (generally with the support of North American Development Bank (NADBank) and in conjunction with the project development efforts of the Border Environment Cooperation Commission (BECC)) must conduct a financial analysis of the existing water and wastewater system and the proposed improvements to determine the capital, operating and maintenance costs of the existing system and the changes in local costs associated with the proposed project.

2. When construction funding is formally requested under the EPA-NADBank Cooperative Agreement, the EPA's regional offices must review the NADBank's submission and accompanying analysis addressing the affordability of a project. The NADBank submission should provide detail on the financial feasibility of the project and the estimated user burden associated with the project proposal. The submission should provide information adequate to determine capital and operating costs, sources of funding and financial feasibility of the project. In the context of the cooperative agreement, two financial mechanisms are available; a buy down of project costs or transition assistance that makes loan repayments affordable to the ultimate users.

THE GUIDANCE

In Mexico, Comisión Nacional Del Agua (CNA) applies its formula for determining which projects are deemed affordable. The results of this financial analysis, on the Mexican side, will be reflected in the BECC's certification documents and in the NADBank's financing proposals. On the U.S. side of the border, the guidance and benchmark measures described in this memorandum establish a framework for conducting an affordability assessment.

An affordability assessment should identify current operations and maintenance and debt retirement costs and estimate the changes in operations and maintenance and financing costs that relate to the proposed project. The financial analysis should consider alternatives for the project sponsor to proceed with construction of the project based on a combination of financing and grant funding of the proposed costs. The benchmark measures contained in this memorandum establish guidelines on identifying projects that appear to be affordable without EPA grant funding. For the most part, projects that are affordable should be financed with maximum reliance on loan and credit mechanisms.

A consistent approach to establishing costs is an essential element in conducting a financial assessment of the proposed project- The following general steps are applicable to establishing a cost basis for both water and wastewater projects:

1. Determine the project sponsor's total project costs by establishing the current costs for existing water or wastewater services and estimate the changes in annualized cost for any proposed project.
 - a. The current costs are defined as current annual operating and maintenance expenses (excluding depreciation) plus current annual debt service (principal and interest). This represents the cash expenses for current operations.
 - b. The estimated project costs for the proposed project should include projected changes in operation and maintenance and debt service expenses. These costs are adjusted to current dollars (i.e. deflated).
2. After estimating changes in the annualized costs that result from the proposed project, then calculate the residential share of the total costs. The residential or household costs should exclude the portion of expenses attributable to commercial, governmental and industrial users.
3. Determine the project's financial impact on users in the context of the benchmark measures established in this memorandum.

**BENCHMARK MEASURES FOR ASSESSING THE IMPACT OF
U.S. WATER AND WASTEWATER PROJECT COSTS ON USERS**

The following benchmark measures will help evaluate user burden and the amount and type of funding assistance required.

1. Consider the project sponsor's cost per household (CPH) as a percentage of the local median household income (MHI). If the current and estimated project costs of the water and wastewater services result in a CPH of less than 1.7 percent of MHI, the project has a low impact and should be considered affordable. Project sponsors should be expected to fully finance costs that are within the affordable range. For costs that are above the benchmark level, the appropriate amount of grant funding and type of assistance will vary on a project-by-project basis considering secondary factors such as the current debt burden of the project sponsor, other sources of funding available, the ability of the project sponsor to assume debt to finance the project, and key socioeconomic indicators such as high unemployment in the service area.
2. Focus on the rate increases that result from the credit financing of the proposed project. If the debt retirement related increases exceed 5 percent per annum, it may be difficult to sustain the rate increases and some form of transition assistance from this program should be a priority — working in conjunction with available sources of credit. If the debt retirement increases exceed 10 percent per annum, the additional user burden has a high impact that may not be adequately addressed under a five-to seven-year transition fund arrangement, and grant financing may be necessary to buy down the costs of the proposed project. Again, as in the example of the above benchmark measures, the project sponsors should be expected to finance costs below the benchmark measures.

Projects that are determined to exceed the above benchmark measures and thus receive EPA funding are expected to proceed to construction as soon as appropriate approvals can be rendered. Projects that can benefit from regionalization of facilities or services should not be adversely affected in terms of the priority, amount, or type of grant funding as a result of selecting a regional alternative.

IMPLEMENTATION

This affordability policy will be implemented through EPA's Cooperative Agreement with the NAD Bank. Under the cooperative agreement the NADBank will be charged with preparing project affordability and financial feasibility assessments.

If you have questions, contact me or Fred Lindsey at (202)260-5853.

UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)



AGRICULTURAL FIELDS NEAR MEXICALI, BC.



USDA RURAL DEVELOPMENT BORDER PROGRAMS

RURAL DEVELOPMENT STATE OFFICE

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See the attached chart describing funding and assistance focusing on California border communities. A full *Catalog of Loan, Grant and Technical Assistance Programs* is available that covers all business, housing, infrastructure and community facilities development programs. This reference tool helps prospective applicants determine if there is a strong match between their strategic plans and the many USDA Rural Development programs available to them.

RURAL STRATEGIES FOR SURVIVAL

California is a diverse panorama of economies. Within that landscape are hundreds of rural communities looking for economic development options.

All communities need and deserve the strategic partnerships and strong coalitions necessary to survive and prosper. Rural residents want affordable homes and essential community facilities. Rural workers need good jobs. Rural cities and towns need dependable water and utility services. And the rural business community needs economic stimulus to compete and expand.

USDA RURAL DEVELOPMENT IS ON YOUR TEAM

In California, USDA Rural Development is ready to help. And we are helping right now through:

- _ Low interest home loans and self-help housing programs for the public
- _ Affordable farm worker housing programs
- _ Grant funding to communities and non-profit economic development groups
- _ Low interest loans and grants for critical utility improvement projects
- _ Technical assistance on community development, housing, business and infrastructure projects
- _ Loan payment guarantee programs for business, home mortgage and multi-family housing lenders

YES, IT CAN BE DONE

Our staff pledges to help our clients through the paperwork process. Most people are pleased to find that it doesn't require an MBA or PhD to complete a successful application. We work with prospects to explain USDA Rural Development programs, to help potential applicants determine if their project meets criteria and then to assist in strategic capital planning.

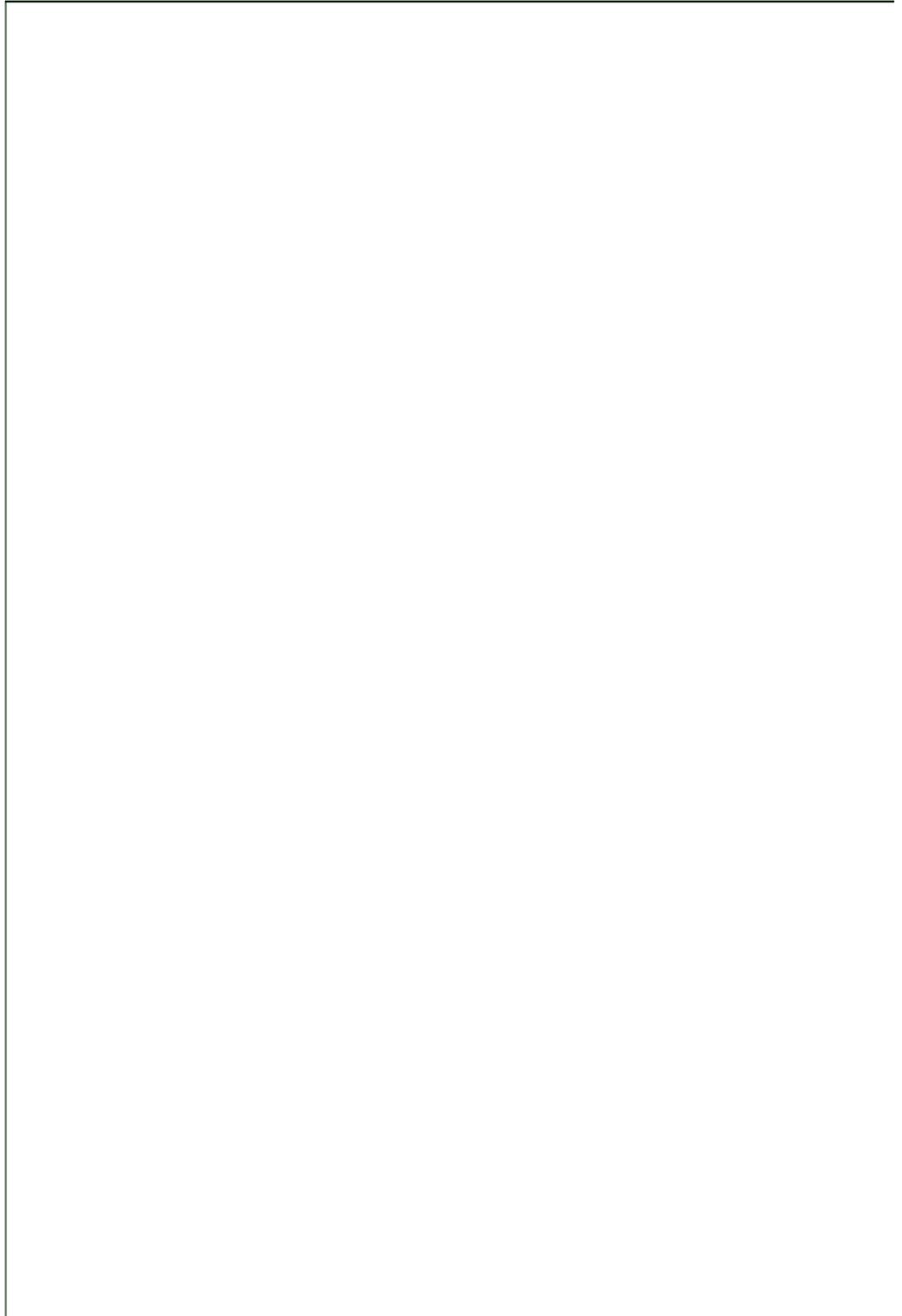
Welcome to USDA Rural Development in California! We are working to help rural people succeed.

D. Paul Venosdel
State Director

Special Rural Development Initiatives in California

USDA Rural Development has established a number of special initiatives to target its assistance to rural communities with the greatest need.

INITIATIVE	PROGRAM DESCRIPTION	ASSISTANCE / CONTACT
SW Border Task Force on Economic Development of the Southwest Border	Multi-agency assistance to communities within 150 miles of the Mexican border	USDA gives higher priority in allocating these program funds and seeks greater leverage in concert with other federal programs - contact Chris Sundstrom at 559-734-8732
Colonias Communities	Multi-Family and Single Family housing and utilities development assistance for "Colonias" within 150 miles of US - Mexico border	USDA gives higher priority in allocating these program funds - contact USDA Local Offices
EZ/EC Empowerment Zone / Enterprise Community	Multi-program assistance for competitively selected communities demonstrating superior cooperation, planning and vision — rural EZ/ECs are in Imperial, Fresno, Tulare Counties, eastern Riverside County and the City of Watsonville	USDA devotes funds in nearly every program to assist EZ/EC communities - contact Chris Sundstrom at 559-734-8732
CC Champion Communities	Multi-program assistance for EZ/EC applicant communities that were not selected but are continuing to work toward their vision	USDA gives Champion Communities higher priority in allocating rural program funds - contact Chris Sundstrom at 559-734-8732
Self Help Self Help Housing Program	Low and very low-income applicants participate with their neighbors in the construction of their homes, fostering pride-of-ownership while reducing their home loans to a more affordable level	Significant RH 502 loan funds are reserved for Self-Help subdivisions every year - contact Bob Anderson at 530-792-5816
CO-OPS Cooperatives Initiative	USDA supports value-added agricultural cooperatives and other types of co-ops	USDA provides technical assistance, grants and guaranteed loans to co-ops - contact Karen Spatz at 530-792-5829
CAIP Community Adjustment and Investment Initiative	Supplemental USDA business program funding for counties suffering job losses from NAFTA (North American Free Trade Agreement)	Extra B and I Guaranteed Loan funds are available to support business projects in these designated areas - contact Larry Strong at 530-792-5805



CALIFORNIA PROJECTS



Brawley County Water District Colonia **Rehabilitation of Sewer Collection and Water Distribution Systems**

AGENCY JURISDICTION

- US ENVIRONMENTAL PROTECTION AGENCY
- CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD-COLORADO RIVER BASIN REGION
- CALIFORNIA DEPARTMENT OF HEALTH SERVICES

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Brawley County Water District Colonia, located in the eastern section of the City of Brawley, has a medium household income of \$18,900 according to a survey performed by the City. The City of Brawley provides both water and sewer service to the Colonia. City staff has documented numerous leaks in the sewer collection and water distribution networks within the colonia. The water and wastewater distribution pipelines are approximately 30 years old. On K Street, the City has repaired 35 breaks in the water and sewer pipelines. This has resulted in the disruption of service to colonia customers, and creates a public health treat to local residents as a result of standing water and wastewater in the streets.

TYPE OF PROJECT

Water Supply and Wastewater Treatment

PROPOSED PROJECT

The proposed projects consists of improvements and rehabilitation of the sewer collection and water distribution systems in the Brawley County Water District Colonia. These improvements will address the various leaks and breaks in the sewer and water systems.

STUDIES NEEDED

In order to develop this project, a closed-circuit television survey of the water distribution and wastewater collection systems in the Brawley County Water District Colonia is needed. This survey will produce an accurate map of the sewer collection and water distribution systems, an evaluation of the condition of these systems, and will make recommendations for any improvements and rehabilitation of both systems. A cost analysis for any improvements and rehabilitation would also need to be performed.

PROJECT LOCATION

The Brawley County Water District Colonia is located in the eastern end of the City of Brawley, approximately 20 miles north of the US-Mexico border. The colonia has a population of approximately 2500 people, living in 500 housing units.

PROJECT PROPONENT(S)

The City of Brawley oversees activities in the Brawley County Water District colonia and thus will be the lead project proponent.

ESTIMATED COST

The estimated cost of the closed-circuit television survey is \$100,000
The estimated cost of any improvements and rehabilitation will be determined once the studies are completed.

City of Brawley

Construction of a CNG Refueling Facility

AGENCY JURISDICTION:

- US ENVIRONMENTAL PROTECTION AGENCY
- CALIFORNIA AIR RESOURCES BOARD
- IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT

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HUMAN HEALTH AND ENVIRONMENTAL NEED

For the last decade, the air quality standards in both the Imperial and Mexicali Valleys have been exceeded for carbon monoxide (CO), ozone (O₃) and particulate matter-10 micrometers (PM-10). The US Environmental Protection Agency (USEPA) has classified Imperial County as an area of non-attainment. The City of Brawley, located in Imperial County, has been designated by USEPA as “moderate” non-attainment for PM-10 and “transitional” for ozone. Air pollution in the region is a public health threat as it has been attributed to exacerbating respiratory illnesses in children and the elderly.

In order to mitigate air pollution in the region, the Imperial County Air Pollution Control District (ICAPCD), in conjunction with the Brawley Union High School District (BUHSD), propose to expand the infrastructure of Compressed Natural Gas (CNG) refueling facilities to encompass the northern portion of Imperial County. BUHSD currently has a small fleet of CNG school buses.

TYPE OF PROJECT

Air Quality Improvement

PROPOSED PROJECT

The proposed project involves the construction of a new skid-mounted, fast fill, 24-hour access, CNG refueling facility in Brawley, CA. An increase in the number of vehicles utilizing cleaner burning fuels can contribute to air pollution reduction in the region. In addition, the construction of a CNG refueling facility in Brawley can provide an incentive for transit agencies, private companies, and governmental agencies to convert their fleets, or portions thereof, to cleaner burning CNG fleets.

NEEDED STUDIES

Facility siting, planning and engineering studies would be needed. This effort will be minimal since similar CNG refueling facilities have been sited and constructed throughout California.

PROJECT LOCATION

The project would be located in Brawley, CA. The project would have a positive air quality impact within the Salton Sea Air Basin (in which Brawley is located) and throughout the entire County of Imperial.

PROJECT PROPONENT(S)

The Brawley Union High School District in cooperation with the Imperial County Air Pollution Control District.

ESTIMATED COST

The estimated cost including studies is \$200,000.

City of Calexico

Water Treatment System Improvements

AGENCY JURISDICTION

- US ENVIRONMENTAL PROTECTION AGENCY
- CALIFORNIA DEPARTMENT OF HEALTH SERVICES

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Calexico in 1999 had a population of 26,150 and is one of the fastest growing cities within Imperial County. The City has an annual average population increase of five percent. The City of Calexico has inadequate water supply capacity for this future growth.

Much of Calexico's recent growth can be attributed to the presence of the Maquiladora manufacturing plants in Mexicali, Baja California. The maquiladoras provide labor-intensive manufacturing services for US based industries and are becoming more attractive to US businesses trying to remain competitive in the current economic climate. The continued productivity of the Imperial Valley as one of the nations top producers of agricultural products and agricultural related industry will also play a role in Calexico's future growth trends. Additionally, Calexico is the only city bordering Mexico that has California Enterprise Zone status. Enterprise Zones were legislated throughout the State of California in 1985. The program provides tax incentives to business, thus encouraging private sector market forces in target areas.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The City of Calexico is proposing improvements to the existing City's Water Treatment Plant and Distribution System. The city is also proposing construction of a satellite pump station with a six million gallon storage reservoir on the easterly city limits. This improvement will enable the City to increase the fire flows and address the inadequate water supply capacity for future growth.

STUDIES NEEDED

Engineering design and environmental assessment studies will be needed.

PROJECT LOCATION

The project will be located within the City of Calexico. This City it is located on the US-Mexico border, approximately 118 miles east of San Diego. It is located immediately north of the metropolitan city of Mexicali, B.C. Mexico, a city with a population of approximately 1.5 million people. The City of Calexico's entire population, approximately 30,000, will benefit from the proposed project.

PROJECT PROPONENT(S)

City of Calexico

ESTIMATED COST

The estimated cost including studies is \$4,995,617.

City of Calexico

New River Sanitation & Encasement

AGENCY JURISDICTION

- CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – COLORADO RIVER BASIN REGION
- IMPERIAL COUNTY

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Often referred to as the most polluted river in the United States, the New River originates near Mexicali, Mexico, and flows across into the California through the City of Calexico and regions of Imperial County before discharging into the Salton Sea. Flows in the New River, carry urban runoff, untreated and partially treated municipal sewage, untreated and partially treated industrial waste, and agricultural runoff. The public health impact of the New River pollution is experienced locally, primarily by the citizens of Calexico and the undocumented workers attempting to cross into the United States by floating or swimming the river.

Pollutant flows in the New River are well documented and date back to the early 1940s. New River has been found to contain fecal and E. Coli bacteria, solid waste (trash) from indiscriminate dumping, raw sewage and industrial discharges (metals, ammonia, phosphates, volatile organic constituents). The New River routinely and substantially exceeds water quality standards for fecal coliforms, dissolved oxygen, a number of industrial chemical constituents, sewage solids and trash. Further testing of fish collected near the border has also revealed abnormally high levels of PCBs and mercury (California Regional Water Quality Control Board (CRWQCB), 1998). In addition, the CRWQCB and the Imperial County Health Department have identified and posted the New River as a public health hazard.

TYPE OF PROJECT

Water Supply, Wastewater Treatment, Solid Waste Management and Industrial and Hazardous Waste

PROPOSED PROJECT

The proposed project will address improvement of the New River water resource, treatment of wastewater, removal and management of solid waste from the river flow, and cleanup of industrial and contaminated river bottom soils.

The proposed project includes:

- Providing trash screening and aeration about 400 ft downstream (North) of the point where the New River enters the United States. This will allow for tires and debris to be removed from the New River;
- Isolating the river from public access by rerouting it through an enclosed channel as well as stabilizing the existing channel. This will provide public health protection, address odor problems, limit access to the river, and cover potentially contaminated sediments in a manner that could be reversed when water conditions upstream improve;
- Cleaning of the New River bottom contaminated soils;
- Creating open space for recreational facilities including walking and bicycle trails, and soccer and baseball fields; and
- New River habitat improvement, such as native plants revegetation and construction of wastewater polishing system consisting of artificial and enhanced wetlands.

STUDIES NEEDED

Preliminary engineering and design, environmental studies to address both California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) will be required as well as permitting through the various Federal, State and local agencies. There have been several concept studies and associated input from various agencies and committees over the years.

PROJECT LOCATION

The project will be located on the California side of the New River in the City of Calexico and continue northerly approximately 3.5 miles to State Route 98, east of Calexico in Imperial County. A wastewater polishing system, including ponds and artificial wetlands, would be created north of State Route 98.

PROJECT PROPONENT(S)

This is a multi task force effort. Proponents include the County of Imperial, City of Calexico, Calexico Citizens New River Committee, Imperial Irrigation District and the Citizens Congressional Task Force on the New River. The lead project proponents are the County of Imperial and the Calexico Citizens New River Committee.

ESTIMATED COST

- Engineering Design
- CEQA/NEPA Studies
- Inlet Structure
- Trash Rack
- Box Culvert
- Open Space habitat improvement
- Wetlands

The estimated cost is \$75 million.



City of Calexico

Expansion of the Calexico-Mexicali West Port of Entry

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Air Resources Board
- Imperial County Air Quality Control District

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Calexico is one of the busiest border crossings cities between the United States and Mexico. Close to 12 million vehicles cross into Calexico each year. The heavily congested roads and resulting vehicle emissions have deteriorated the air quality of the region. For the last decade, the air quality standards in both the Imperial and Mexicali Valleys have been exceeded for carbon monoxide (CO), ozone (O₃) and particulate matter-10 micrometers (PM-10). The US Environmental Protection Agency (USEPA) has classified Imperial County as a non-attainment area. Air pollution in the region is a public health threat as it has been attributed to exacerbating respiratory illnesses in children and the elderly.

TYPE OF PROJECT

Air Quality Improvement and Public Transportation

PROPOSED PROJECT

The City of Calexico proposes to expand the Calexico-Mexicali West Port of Entry to address heavily congested roads and the resulting air quality deterioration.

STUDIES NEEDED

The City of Calexico has prepared under contract a traffic circulation study dated June 12, 2000, and a Calexico West Border Station Expansion Circulation Analysis dated March 2003, which includes a mitigation and cost analysis.

Preliminary engineering, design, and environmental studies will be required for preparation of plans and specifications for construction. California Environmental Quality Act (CEQA) and possibly National Environmental Policy Act (NEPA) studies may also be required to address the environmental impacts, as well as other permit processes through the various Federal, State, and local agencies.

PROJECT LOCATION

The project will be located within the City of Calexico. The City is located on the US-Mexico border, approximately 118 miles east of San Diego. The City of Calexico, with a population of approximately 30,000, is located immediately north of the metropolitan City of Mexicali, Mexico, which has a population of approximately 1.5 million.

PROJECT PROPONENT(S)

City of Calexico

ESTIMATED COST

The estimated cost is \$8,744,316.

Calexico Port of Entry Traffic Totals

January-December 2002

	Calexico West	Calexico East
<i>Pedestrians</i>	<i>6,924,761</i>	<i>9,749</i>
<i>Vehicles</i>	<i>8,203,082</i>	<i>3,719,776</i>
<i>Total Persons</i>	<i>20,902,658</i>	<i>8,161,717</i>
<i>Commercial Trucks</i>	<i>—</i>	<i>260,606</i>

** The new East Calexico Port of Entry provides an improved link to major trucking routes, and to move people and goods between Mexico and the United States.*

City of Calexico

Wastewater System Improvements

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Calexico in 1999 had a population of 26,150 and is one of the fastest growing cities within Imperial County. The City has an annual average population increase of five percent. The City of Calexico has inadequate wastewater collection and treatment capacity for future growth. Additionally, the City's sewage collection system and many of the wastewater treatment plant components are over 30 years old.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The City of Calexico is proposing improvements to the existing City's Wastewater Treatment & Collection System, which consists of nineteen thousand lineal feet of 36-inch and 42-inch sewer main collection, two lift stations, two secondary clarifiers, one aerator, two dewatering units, plant controls, pumps, and mechanical piping.

STUDIES NEEDED

A study to evaluate the City's Wastewater Treatment Plant & Sewage Collection System will be needed. This study will identify and recommend improvements and rehabilitation to the wastewater system. Preliminary engineering, design, and environmental studies will be needed for any improvements and rehabilitation recommended. A rate study will also need to be performed.

PROJECT LOCATION

The project will be located within the City of Calexico. The City is located on the US-Mexico border, approximately 118 miles east of San Diego. The City of Calexico's entire population, approximately 30,000, will benefit from the proposed project.

PROJECT PROPONENT(S)

City of Calexico

ESTIMATED COST

The estimated project cost including studies is \$9,240,000 (2002 figure).

City of Calipatria

Sewer Collection System Improvements

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Calipatria owns and operates an aeration pond system to treat domestic wastewater from the City of Calipatria and the Calipatria State Prison. City staff have documented several leaks and breaks in the sewer lines, which were constructed over 50 years ago and have been impacted by several small earthquakes. Over the past year and a half, City staff has replaced a sewer manhole and three broken sewer lines. Sewer pipeline overflows are a public health threat to local residents and can potentially impact surface water quality. A portion of the City's surface water runoff eventually discharges into the Alamo River, which flows into the Salton Sea.

Additionally, based upon the results of recent priority pollutant monitoring, the City of Calipatria has determined it will be unable to achieve immediate compliance with the new proposed effluent limits under the California Toxics Rule (CTR). Specifically, the City of Calipatria has exceeded effluent CTR limits for selenium, thallium, and cyanide. As a result, the City requires additional assistance with the characterization and source identification of elevated priority pollutant levels at the plant. The groundwater in the vicinity of the plant is shallow, and the City speculates the source of elevated metals concentrations may be due to local groundwater infiltration from surrounding contaminated soils into the collection system. Treated and disinfected effluent from the plant is discharged into the "G" Drain, which flows directly into the Alamo River, and then ultimately into the Salton Sea.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of improvements and rehabilitation of the sanitary sewer collection system in the City of Calipatria. These improvements will address the various leaks and breaks in the sewer system, and could also address current effluent limit exceedances at the City's Wastewater Treatment Plant.



THE AVERAGE FLOW OF THE CITY OF CALIPATRIA WASTEWATER TREATMENT PLANT IS APPROXIMATELY 1.1 MILLION GALLONS PER DAY (MGD).

STUDIES NEEDED

In order to develop this project, the City needs to perform a closed-circuit television survey of the entire sewer collection system, which is comprised of approximately 92,000 lineal feet of pipeline. This survey will produce an accurate map of the collection system, an evaluation of the condition of the system, and will make recommendations for any improvements and rehabilitation. A cost analysis for any improvements and rehabilitation recommended would also need to be performed.

In addition, the City needs to perform a groundwater infiltration study to determine the potential source(s) of elevated metals effluent concentrations at the plant. This study will determine whether groundwater infiltration into the sewer collection system is the cause of elevated levels of cyanide, selenium, and thallium at the plant's effluent discharge.

PROJECT LOCATION

The City of Calipatria wastewater treatment plant is located near the intersection of Lindsay and English Streets, in the southwestern corner of the city, approximately 35 miles north of the US-Mexico border. The closed-circuit television survey would be performed in approximately 92,000 lineal feet of various sized clay and hard-plastic pipeline.

The population of the City of Calipatria is approximately 8,000, 25% of which live below the poverty level. The project would benefit the entire City population and the Alamo River and Salton Sea drainage basins.

PROJECT PROPONENT(S)

City of Calipatria

ESTIMATED COST

The estimated cost for the closed-circuit television survey is \$105,000.

The estimated cost for the groundwater infiltration study is \$60,000.

The estimated cost of improvements and rehabilitation to the sewer system will be known once studies are completed.

Community of Campo

Development of a Water/Wastewater Master Plan and Groundwater Management Plan

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-San Diego Region
- California Department of Health Services

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The County of San Diego owns and operates a local water supply and sewer treatment/disposal system that serves the unincorporated community of Campo, located in southeastern San Diego County. This system serves County facilities (primarily a juvenile detention camp) and approximately 48 residential/commercial properties, including the U.S. Border Patrol, Postal Service and Campo Railroad Museum. The Federal government originally constructed the water/sewer system in order to serve the Army's Camp Lockett during World War II. Following the war, the base and supporting infrastructure was conveyed to the County of San Diego. However, the County never received any "as-built" drawings or system maps. Knowing the location and general condition of both systems would be highly desirable and would provide a baseline framework upon which to prepare a master water and sewer facility plan for the area.

The Campo area is also dependent on groundwater resources as its principal water supply. Because groundwater is the only sole source of water supply for the area, it is important that the resource and its withdrawal limits be understood. The last study of Campo groundwater conditions occurred in the early 1980's. Since that time weather patterns have generally been mixed between dry to moderately wet. During 1999-2003 the pattern was extremely dry. In order to ensure long-term availability of this limited resource, development of a groundwater management plan should also be pursued.

TYPE OF PROJECT

Water Supply, Wastewater Treatment and Water Management

PROPOSED PROJECT

The proposed project consists of a water/wastewater system assessment, development of a water/wastewater master plan, a groundwater assessment and development of a groundwater management plan.

Water/Wastewater System Assessment and Master Plan:

Phase 1: Inventory and assess the location and condition of all water supply and wastewater facilities in the unincorporated community of Campo operated by the County of San Diego.

Phase 2: Based on the information developed in Phase I, prepare a water and wastewater facility master plan in conjunction with the San Diego County General Plan.

Groundwater Assessment and Management Plan:

Phase I: Perform an updated groundwater assessment

Phase II: Based on information obtained in Phase I, develop a Groundwater Management Plan.

STUDIES NEEDED

As part of the proposed water/wastewater master plan, a financial feasibility analysis and plan will also be needed. In addition, engineering plans will be required to form the basis for a five year Capital Improvement Plan.

The groundwater assessment component would include necessary background hydrogeological studies and updates of previous reports. The most recent investigation occurred in the early 1980's as part of the Campo Hills development project (Final Environmental Impact Report – Campo Hills Mobile Home

Park, March 15, 1984 – Log #81-21-6). Additional water quality information is also available from the County as part of a recent study to amend the California Regional Water Quality Control Boards Waste Discharge Permit for the Campo wastewater treatment facility.

PROJECT LOCATION

Campo is located in southeast San Diego County approximately 60 miles from San Diego. Campo adjoins the US-Mexico border to the south and the Campo Indian Reservation to the north and east.

PROJECT PROPONENT(S)

County of San Diego – Department of Public Works, Wastewater Management, in cooperation with the County Department of Planning and Land Use and the Campo/Lake Morena Community Planning Group.

ESTIMATED COST

Water/Wastewater Component Cost

Phase I: \$ 175,000

Phase II: \$150,000

Total: \$325,000

Groundwater Component Cost

Phase I: \$150,000

Phase II: \$200,000

Total: \$350,000

Community of Descanso

Installation of Groundwater Treatment System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- San Diego County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Descanso Community Water District operates two drinking water wells (a primary and backup well). Currently, both groundwater wells exceed the secondary Maximum Contaminant Levels (MCLs) for iron and manganese, per the California Department of Health Services (DHS) regulation. The primary well is the only well in use because the District injects potassium phosphate in order to retain the high iron and manganese in suspension in the groundwater, such that it does not form deposits during household use. This practice is an acceptable stopgap measure, masking the presence of these visual contaminants, but not removing them. The District has utilized this practice for many years. As a result, the primary well has been grandfathered as an acceptable domestic water supply source. However, iron and manganese concentrations above the secondary MCLs are a potential public health threat.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The District proposes to install adequate treatment at their primary and back-up groundwater wells in order to meet drinking water secondary MCLs for iron and manganese. The District proposes to utilize high-rate filtration treatment technology. The District has performed pilot tests and desk-top analyses to confirm that high-rate filtration removes levels of iron and manganese to below the secondary MCLs of iron and manganese at both wells. This project will allow both wells to be utilized. In addition, the District will be able to discontinue the injection of potassium phosphate.

STUDIES NEEDED

Preliminary and final engineering design is needed for the proposed treatment. To date only pilot tests and desk-top analyses of the high-rate filtration have been performed.

PROJECT LOCATION

Descanso is a small unincorporated community of approximately 1,000 people (300 connections) located about 30 miles east of San Diego. The entire community's population will benefit from the proposed project.

PROJECT PROPONENT(S)

The Descanso Community Water District

ESTIMATED COST

The estimated cost for both the preliminary and final engineering design is approximately \$35,000. The estimated cost for installation of a high-rate filtration system is \$270,000.

Community of Desert Shores

Wastewater Treatment System Improvements

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin Region

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Salton Community Services District operates a wastewater treatment plant in Desert Shores, California. The operation is a percolation ponding system, which is located at a higher elevation than the residences it services. Percolation flows are shallow (3-5 feet below ground surface) and as a result, ponding has occurred in the neighboring property. Additionally, the plant influent now exceeds 80% of capacity, and the District may reach capacity within 24 months.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of improvements to the wastewater treatment system in the community of Desert Shores in order to address ponding in the neighboring property.

STUDIES NEEDED

A feasibility study will be needed to identify and assess alternatives, and make recommendations for any improvements to the wastewater treatment system. A cost analysis will also need to be performed. The alternatives to be assessed include continued percolation, discharge to the Salton Sea, and water recycling. In addition, preliminary and final engineering studies and environmental assessments will be needed. Some work has already been performed through a BECC grant to address saltwater intrusion into the community's sewer collection system.

PROJECT LOCATION

The community of Desert Shores is located along the west shore of the Salton Sea, in Imperial County, approximately 50 miles north of the US-Mexico border and 25 miles south of Indio, California. The entire community of Desert Shores, with a population of approximately 1000 people, will benefit from the proposed project.

PROJECT PROPONENT(S)

Salton Community Services District

ESTIMATED COST

The estimated cost to perform all studies is \$120,000.
The estimated cost of improvements to the system will be known once studies are completed.

Imperial County

Conversion of Regional Public Transit Vehicles to Alternative Fuel

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Air Resources Control Board
- Imperial County Air Pollution Control District

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HUMAN HEALTH AND ENVIRONMENTAL NEED

For years the air quality standards in both the Imperial and Mexicali Valleys have been exceeded for carbon monoxide (CO), ozone (O₃) and particulate matter-10 micrometers (PM-10). The US Environmental Protection Agency (USEPA) has classified Imperial County as a non-attainment area. Air pollution in the region is a public health threat as it has been attributed to exacerbating respiratory illnesses in children and the elderly.

The Imperial Valley Association of Governments (IVAG), in cooperation with the Air Pollution Control District, identified the need to examine the use of alternative fuels in the regional transit bus system in order to mitigate air pollution problems in Imperial Valley. As a result, IVAG contracted the Transit Resource Center of Florida to prepare an impact analysis report to identify the need and impact of the use of two types of alternative fuels, Compressed Natural Gas (CNG) and low sulfur diesel. The report, titled "Imperial County Alternatives Fuel Impact Analysis", published in May 2003, also identifies the investment in capital rolling stock and infrastructure needed, as well as the additional operational annual costs that would be incurred on the daily transit system. The report concluded that the existing revenue sources could accommodate the increased operational costs. However, the capital outlay for the rolling stock (vehicles) is identified as an unmet need.

Typical funding sources such as the Congestion Management and Air Quality (CMAQ) funds are not available to the Imperial Valley region at this time. Therefore, alternate funding sources are sought to acquire the vehicles.

TYPE OF PROJECT

Air Quality Improvement

PROPOSED PROJECT

The proposed project involves the replacement of the existing fleet of transit vehicles in Imperial County with alternative fueled vehicles. This will involve the procurement and delivery of either low sulfur diesel or CNG transit buses, thus improving air quality in the region.

PROJECT LOCATION

The project will convert or replace existing public transit vehicles to an alternative fuels type throughout Imperial County as part of the Imperial Valley Association of Governments (IVAG) Regional Transit System.

PROJECT PROPONENT(S)

Imperial County Department of Public Works

ESTIMATED COST

The total estimated cost is \$5,000,000.

Imperial County

Landfill Closures & Transfer Stations Construction

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Integrated Waste Management Board
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Imperial County is a rural, agricultural based County located at the southeast most corner of California, bounded by Arizona to the east and Mexico to the south. The County operates and maintains ten landfills that aggregately take in approximately 30,000 tons per year of municipal solid waste. Nine out of the ten landfills are only open twice per week. The County landfills are located throughout the Imperial Valley and primarily serve small rural, outlying population areas. It is currently not cost effective to operate and maintain these landfills. However, the County is required to provide a sanitary means of solid waste disposal services to the public. This is in fact critical as the alternative could include indiscriminate illegal dumping of waste in environmentally sensitive areas of the County.

By the Spring of 2007, the County must close four landfills (Brawley, Ocotillo, Palo Verde and Picacho Landfills) due to an agreement recently entered into with the California Integrated Waste Management Board (CIWMB). The remaining landfills will also be approaching capacity and require closure. In addition, there is insufficient tonnage being received at all the landfills to justify ongoing operations of landfilling.

When closure of a landfill occurs, a transfer station must be made available so that affected residents can continue to dispose of solid waste at a nearby location. Recently, the County successfully implemented a low volume transfer station at one of the outlying rural landfills and has seen a dramatic decrease in Operation & Maintenance costs.

TYPE OF PROJECT

Solid Waste Management

PROPOSED PROJECT

The proposed project consists of final closure or early closure of eight landfills in Imperial County (Brawley, Imperial, Holtville, Hot Spa, Palo Verde, Niland, Ocotillo, and Picacho Landfills), and the construction of transfer stations at the aforementioned landfills and at the Salton City Landfill, except for the Palo Verde Landfill where a transfer station already exists. Construction of these transfer stations will allow area residents and in one case, packer trucks to deposit their waste into transfer bins via a transfer station, which will then be hauled to another landfill.

The Transfer Station component will include necessary environmental and geotechnical studies as well as design and engineering to construct the transfer stations. The Final Closure component would include provisions for preparing the necessary final closure plans, environmental studies as well as design and engineering to construct the Final Closure of the landfills. The Transfer Stations would be sited on the landfills and there will be modifications to the final closure plans to address the transfer operations. The existing transfer station at the Palo Verde Landfill will not be impacted by the final closure of the landfill.

The County has designated funds in an account, which is not sufficient for closure, but could be used as a local match. The Project will therefore require supplemental funds to initiate and construct final closure of the landfill.

Table 1. Amount of Solid Waste Received and Proposed Project for Each Landfill

LANDFILL	SOLID WASTE RECEIVED (TONS/DAY)	DAYS OPEN PER WEEK (DAYS/WK)	PROPOSED PROJECT
Brawley ¹	75-120	6	Closure & Transfer Station
Imperial	10	2	Closure & Transfer Station
Holtville	10	2	Closure & Transfer Station
Hot Spa	5	2	Closure & Transfer Station
Niland	5	2	Closure & Transfer Station
Ocotillo	5	2	Closure & Transfer Station
Palo Verde	5	2	Closure Only
Picacho	10	2	Closure & Transfer Station
Salton City	5	2	Transfer Station Only

¹ The type of transfer station required for this site will be a large volume type with much more infrastructure requirements and permitting than the outlying rural site requirements.



THE PALO VERDE TRANSFER STATION

STUDIES NEEDED

Transfer Station Component: Preliminary Engineering is required for preparation of Plans and Specifications for Transfer Stations Construction. This will include geotechnical foundation reports, topographic update for site layouts, engineering and environmental documentation as well as permitting necessary to address California Environmental Quality Act (CEQA) and possibly National Environmental Protection Act (NEPA).

Final Closure Component: Preliminary Engineering is required for preparation of Plans and Specifications for Final Closure Construction. This would include geotechnical reports, hydrological studies, topographic updates, engineering and other environmental documentation. The county has a draft Final Closure and Post Closure Maintenance Plan for the Brawley Landfill and Preliminary Closure and Post Closure Maintenance Plans for the other landfills. These plans may have to be further modified for the proposed Transfer Stations

PROJECT LOCATION

Table 2. Project Location and Population to Benefit

LANDFILL	LOCATION	POP. BENEFIT
Brawley	Located in the northeast quadrant of Hovley Road and Brawley Dump Road adjacent to the New River, north of the City of Brawley in the unincorporated area of Imperial County.	22,266
Imperial	Adjacent to the New River at Worthington Road approximately six miles west of the City of Imperial in Imperial County.	664
Holtville	Off Whitlock Road, one mile north of Norrish Road, east of the City of Holtville in the unincorporated area of Imperial County.	1,437
Hot Spa	Located on Spa Road, east of State Route 111 and the Salton Sea in the unincorporated area of Imperial County.	1,158
Niland	Located off Cuff Road, northeast of the community of Niland, in the unincorporated area of Imperial County.	1,143
Ocotillo	Located off Shell Canyon Road, north of the townsite of Ocotillo in Imperial County.	296
Palo Verde	Located on Stallard Road, three miles west of Palo Verde in the unincorporated area of Imperial County.	236
Picacho	Located on Picacho Road between the community of Winterhaven and Picacho State Park in the unincorporated area of Imperial County within tribal lands belonging to the Quechan Indian Nation.	529
Salton City	Located three miles south of the community of Salton City and three miles west of State Highway 86 in the unincorporated area of Imperial County.	1,370
Calexico Population to Benefit		914
TOTAL POPULATION TO BENEFIT		30,013

PROJECT PROPONENT(S)

Imperial County Department of Public Works

ESTIMATED COST

Table 3. Estimated Cost

LANDFILL	TRANSFER STATION COST, \$	FINAL CLOSURE COST, \$	TOTAL COST, \$	COUNTY FUNDS AVAILABLE, \$	TOTAL NEED FOR PROJECT COMPLETION, \$
Brawley	\$2,500,00	\$2,164,108	\$4,664,108	\$2,264,715	\$2,399,393
Imperial	\$131,500	\$ 854,627	\$ 986,127	\$ 318,666	\$667,461
Holtville	\$131,500	\$1,386,933	\$1,518,433	\$952,603	\$565,830
Hot Spa	\$131,500	\$582,599	\$714,099	\$128,372	\$585,727
Niland	\$131,500	\$912,685	\$1,044,185	\$434,086	\$610,099
Ocotillo	\$131,500	\$551,382	\$682,882	\$289,491	\$393,391
Palo Verde	---	\$760,687	\$760,687	\$398,599	\$362,088
Picacho	\$131,500	\$978,656	\$1,110,156	\$728,990	\$381,166
Salton City	\$131,500	---	\$131,500	---	\$131,500
TOTAL NEED					\$6,096,655

**The estimated costs include all necessary design, engineering, environmental, geotechnical studies as well as construction costs. Imperial County will perform much of the project management and coordination efforts.*

Imperial County **Waste Tire Cleanup**

AGENCY JURISDICTION

- County of Imperial Department of Public Works
- Imperial Valley Solid Waste Reduction Task Force
- Imperial Irrigation District

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DESCRIBE THE HUMAN HEALTH AND ENVIRONMENTAL NEED

Imperial County is a rural county with a geographic area of approximately 4,600 square miles and a population of about 145,000 people. Waste tires are continuously dumped illegally throughout the County. Imperial County currently maintains over 2500 miles of paved and unpaved roads. The Imperial Irrigation District (IID) maintains over 1600 miles of canal ditch bank roads. Tires are typically dumped along both Imperial County and IID roads. This type of pollution is not only a public nuisance, but also a public health threat due to disease vectors. In addition, tire waste can cause a negative impact to the county's environmentally sensitive areas.

Imperial County along with local municipalities participate in the Imperial Valley Solid Waste Reduction Task Force. This task force actively seeks funding for the collection of used waste tires, coordinates tire abatement programs with service organizations, and is currently setting up a citizen's hotline for the region. Imperial County in cooperation with IID and the Imperial Valley Solid Waste Reduction Task Force are interested in augmenting their efforts through the collection of waste tires on County roads and along canal ditch banks.

TYPE OF PROJECT

Solid Waste Management

PROPOSED PROJECT

The project involves collection and proper disposal of illegally disposed waste tires throughout Imperial County. Clean-up efforts will focus on county roads and along canal ditch banks. Imperial County will coordinate efforts with service organizations such as the Boy Scouts, 4H and other volunteer groups in order to collect waste tires and dispose of them in County container bins to be located at key locations throughout the region. Imperial County proposes to self-haul or contract the hauling to a designated tire recycling facility.

STUDIES NEEDED

No studies needed.

PROJECT LOCATION

The tires are scattered throughout the entire Imperial County, primarily over 2500 miles of county roads and 1600 miles of irrigation canal ditch bank roads.

AGENCY JURISDICTION

County of Imperial Department of Public Works in cooperation with the Imperial Valley Solid Waste Reduction Task Force and Imperial Irrigation District.

ESTIMATED COST

The estimated cost for collection, coordination with service organizations, advertising and hauling is estimated at \$125,000.

Imperial County **Cleanup of Illegal Disposal Waste Sites**

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Integrated Waste Management Board
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Indiscriminate or illegal dumping of commercial and residential municipal solid waste along county roads is an ongoing problem in Imperial County. Discarded waste can be a human health issue due to putrefaction and resulting vector generation. Discarded waste is also a potential storm water pollutant, which can enter water bodies, threatening health of aquatic life, bird populations, and consequently enter the human food chain. Unsightly discarded trash or waste can cause a negative impact to the county's environmentally sensitive areas as well as within the county's agricultural irrigated areas.

TYPE OF PROJECT

Solid Waste Management

PROPOSED PROJECT

The project consists of cleanup of illegal dump sites and trash along the county roads within the County of Imperial. A contractor will remove the waste by hauling it to a county or other designated landfill or recycle as required. In addition, the project will include advertising and preparation of informational brochures addressing illegal dumping in the County and its relationship to storm water impacts. Deliverables would include tonnage of waste recovered from county roads, advertising performed and number of brochures printed and made available to the public.

STUDIES NEEDED

The waste cleanup project will require engineering related to preparation of a contract and bid documents as well as advertising and brochure development needs. No actual studies will be required.

PROJECT LOCATION

Imperial County is located in the southeast corner of California and shares its southern border with Mexico. Cleanup activities will occur at various road locations in Imperial County.

PROJECT PROPONENT(S)

Imperial County Department of Public Works

ESTIMATED COST

The estimated cost for advertising, brochure preparation and preliminary engineering for bid documentation is \$20,000.

The estimated cost for cleanup, reporting and solid waste tipping fees is \$180,000.

The estimated cost is \$200,000.

Imperial County

Construction of a Water Treatment and Distribution System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Imperial Valley residents who reside in unincorporated areas not currently served by a Water District, lack access to municipal public water supply. These residents rely on untreated canal water for household needs and expensive bulk hauled water for drinking. In addition, the groundwater aquifer within the area is shallow and highly saline and has been designated as having no beneficial use by the California Regional Water Quality Control Board-Colorado River Basin. The Environmental Protection Agency (USEPA) and the California Department of Health Services (DHS) have also indicated concerns regarding human exposure to untreated canal water in the region. Imperial County needs a Water Treatment and Distribution System to service residents lacking access to potable water.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project consists of the construction, administration and service of a Centralized Municipal Water Treatment Facility and a valley-wide water distribution system to serve residents in the unincorporated regions of Imperial Valley not currently served by a Water District. This project will address the public health risk regarding human exposure to untreated canal water in the region.

STUDIES NEEDED

A comprehensive feasibility study is required to identify water treatment and distribution needs and recommend most appropriate alternatives to serve the needs of rural Imperial Valley residents. Preliminary and Final Engineering Design will be needed for the Municipal Water Treatment Facility and Distribution System. In addition, a study will also be needed to identify Operation & Maintenance (O&M) needs and recommend most appropriate approach to ensure adequate O&M of the system. Additionally, a Financial Feasibility Study is a necessity.

PROJECT LOCATION

Imperial County is located in the southeast corner of California and shares its southern border with Mexico. The Project area is located in the central valley portion of Imperial County. The proposed project area extends approximately 45 miles north from the US-Mexico border and its southern boundary borders Mexico by approximately 30 miles.

PROJECT PROPONENT(S)

A Joint Powers Agreement (JPA) between Imperial County, the Imperial Irrigation District, and the local municipalities. In the event that a JPA is not feasible, Imperial County and/or the Imperial Irrigation District will act as lead or co-lead project proponents.

ESTIMATED COST

A best estimate has not been determined. Imperial County would require assistance in estimating costs for this project.

City of Imperial

Rehabilitation of Wastewater Treatment Plant

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Imperial operates a wastewater treatment plant, which utilizes an ultraviolet disinfection system. The ultraviolet system was designed in 1995 to meet the coliform disinfection standards at that time. In the year 2000, the coliform standard became more stringent, and the facility has sustained a much greater number of coliform violations since that time. The City has met with members of the California Regional Water Quality Control Board-Colorado River Basin, the U.S. Environmental Protection Agency, and the California Environmental Protection Agency to discuss the problem and potential solutions. It is strongly believed that much of the problem lies with the ultraviolet equipment, as it was designed to meet the previous, less stringent coliform limitations. Treated effluent from the plant is discharged into the Dolson Drain, which flows directly into the Alamo River, and then ultimately into the Salton Sea.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of improvements and rehabilitation of the wastewater treatment system in the City of Imperial. These improvements and rehabilitation would address current coliform standard exceedances at the plant that have occurred as a result of the more stringent standards set in 2000.

STUDIES NEEDED

A Feasibility Study is needed in order to evaluate the effectiveness of the disinfection system at the City of Imperial Wastewater Treatment Plant and identify and recommend alternatives to improve disinfection capabilities at the plant. A cost analysis for any improvements and rehabilitation recommended would also need to be performed.

PROJECT LOCATION

The City of Imperial is located in southern Imperial County, just north of El Centro. The population of the City of Imperial is approximately 8,800. The entire City's population as well as the Alamo River and Salton Sea drainage basins would benefit from the project.

PROJECT PROPONENT(S)

The City of Imperial

ESTIMATED COST

The estimated cost of the feasibility study is \$60,000. The estimated cost of improvements and rehabilitation recommended will be known once studies are completed.

Community of Jacumba

Water System Improvements and Rehabilitation

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- San Diego County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Jacumba Community Services District's water system consists of old and failing infrastructure. The primary well was constructed without an annular protective seal, which can significantly reduce the likelihood of the well acting as a contamination conduit. In addition, the primary well does not produce enough water pressure for fire protection capacity. Because of the shallow screened interval (10-20 feet below ground surface), the well, during heavy rains, is artesian resulting in water breaching to the surface. Additionally, the backup well exceeds sulfur and coliform criteria, and needs to be continuously chlorinated prior to being placed on-line. Also, the transmission lines are constructed of PVC piping, and the District replaces an average of six breaks every year. Furthermore, some of the homes in Jacumba are not currently metered and new water meters need to be installed.

TYPE OF PROJECT:

Water Supply

PROPOSED PROJECT

The proposed project consists of improvements and rehabilitation of the Jacumba's water system. This will involve the installation of a groundwater treatment system that can provide a more reliable water source and ensure adequate water pressure for fire fighting capability. Also, the project will involve the construction of a larger supply tank. This will involve the replacement, upsize and looping of water lines in addition to the construction of a new water booster station. Water meters will also be installed.

STUDIES NEEDED

The Jacumba Water Services District has completed a preliminary engineering design report and environmental assessment for the proposed project.

A financial analysis of the water system is needed in order to justify any rate increases and to insure that the utility has sufficient reserve funds for the increased operational costs associated with the new proposed system.

PROJECT LOCATION

Jacumba is a small community located in southeastern San Diego County about 5 miles north of the US-Mexico border. Jacumba, which has an average annual median income of \$14,000, has a population of about 500. The entire community would benefit from the proposed project.

AGENCY JURISDICTION

US Environmental Protection Agency
California Department of Health Services
San Diego County

PROJECT PROPONENT(S)

Jacumba Community Services District

ESTIMATED COST

The estimated cost of the project is \$2,200,000.

Community of Jamul

Installation of Efficient Water Irrigation Technology

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-San Diego Region
- San Diego County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Jamul-Dulzura Union School District currently imports surface water to irrigate ball fields. The cost of this practice is high and local groundwater sources are limited.

TYPE OF PROJECT

Water Management

PROPOSED PROJECT

The proposed project consists of the installation of more efficient water irrigation technology for the Jamul-Dulzura Union School District. This project will decrease water demand and in turn address expensive water costs currently incurred by the District for landscape irrigation.

STUDIES NEEDED

A study is needed to evaluate the current irrigation system and to propose and recommend water conservation alternatives for the District's landscape irrigation program. The study will take into consideration the possibility of upgrading the current failing septic system to a small wastewater treatment plant, which will treat wastewater to the appropriate water reuse criteria for on-site irrigation.

PROJECT LOCATION

Jamul is an unincorporated community in southeastern San Diego County, approximately 25 miles north of the US-Mexico border. Jamul has a population of approximately 6,000. Approximately 1,200 students and a number of local residents utilize the District's ball fields for recreational use.

AGENCY JURISDICTION

US Environmental Protection Agency
California Regional Water Quality Control Board-San Diego Region
San Diego County

PROJECT PROPONENT(S)

The Jamul-Dulzura Union School District

ESTIMATED COST

The estimated cost of the feasibility study is \$20,000.
The estimated cost of recommended water management/conservation measures will be known once study is completed.

Community of Jamul

Rehabilitation of Septic System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-San Diego Region
- San Diego County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The septic system for the Jamul-Dulzura Union School District is old and failing. The leach field lines are often blocked with mud, causing the system to clog and raw sewage to back-up. In addition, many of the leach field lines are shallow causing raw sewage to surface during the rainy season. The failing septic system is located within the school district's recreational areas (i.e. ball fields), which are utilized by students (K-8) and local residents. The potential exposure to raw sewage is a serious health threat.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of rehabilitation or upgrade to a wastewater treatment plant of the septic system for the Jamul-Dulzura Union School District. This project will address septic tank system deficiencies.

STUDIES NEEDED

A study is needed to evaluate the current septic system and to propose and recommend alternatives to address system deficiencies. This study will make recommendations for improvements, rehabilitation and upgrade of the system. The study will consider upgrade of the septic system to a small wastewater treatment plant. This plant would treat wastewater to the appropriate water reuse criteria for on-site irrigation.

PROJECT LOCATION

Jamul is an unincorporated community in southeastern San Diego County, approximately 25 miles north of the US-Mexico border. Jamul has a population of approximately 6,000. The Jamul-Dulzura Union School District's ball fields have a total area of approximately nine acres, and are used by 1,200 students and a number of local residents.

AGENCY JURISDICTION

US Environmental Protection Agency
California Regional Water Quality Control Board-San Diego Region
San Diego County

PROJECT PROPONENT(S)

The Jamul-Dulzura Union School District

ESTIMATED COST

The estimated cost of the feasibility study is \$20,000.
The estimated cost of recommended rehabilitation or upgrade will be known once study is completed.

Mesa Verde Colonia

Construction of a Reliable Backup Groundwater System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Riverside County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Riverside County Economic Development Agency (EDA) operates the water system for the Colonia of Mesa Verde (Riverside County Service Area #122). Two wells currently serve a population of 1,300 within the colonia. However, Mesa Verde lacks a reliable redundant or standby water source. The groundwater produced by the backup well exceeds primary Maximum Contaminant Levels (MCLs) for nitrates, gross alpha, fluoride and uranium. The California Department of Health (DHS) mandates that the well only be used for emergency purposes, and that additional treatment be installed before the backup well can be used as an active water source.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project consists of drilling a new well near the site of Mesa Verde's active water well. Based on previous studies, the groundwater quality at the proposed location is significantly better than that of the current backup well. The project will also involve the installation of a groundwater treatment system, water storage facilities, and transmission lines from the new well site to the colonia. This project will provide Mesa Verde with a reliable backup water supply source that meets water quality standards in the event that the active well is taken out of service for routine maintenance.

STUDIES NEEDED

No additional studies are needed. The Border Environment Cooperation Commission prepared a Preliminary Engineering Report, titled "Water Supply Alternatives, Mesa Verde and Ripley", dated February 2002. This report provides a summary of current water supply infrastructure, and analyzes various water treatment alternatives to improve the reliability of this region's groundwater supply.

PROJECT LOCATION

Mesa Verde, also known as Nicholls Warm Springs, is an unincorporated colonia in southeastern Riverside County. It is located 10 miles west of the Colorado River, and 60 miles north of the U.S./Mexico border. The project will benefit approximately 1300 users. The new water well will be drilled near Mesa Verde's currently active water source, located four miles west of the colonia.

PROJECT PROPONENT(S)

Riverside County Economic Development Agency is the lead project proponent. Desert Alliance for Community Empowerment acts as an advocate for the Colonia of Mesa Verde.

ESTIMATED COST

The estimated cost is \$2,000,000.

Niland Colonia

Rehabilitation of Sewer Collection System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Niland Sanitary District (NSD) owns and operates an aeration pond system to treat wastewater from the colonia of Niland. District staff have documented several leaks and breaks in the sewer lines, which were constructed over 50 years ago and have been impacted by several small earthquakes. Sewer pipeline overflows are a public health threat to local residents and can potentially impact surface water quality.

Additionally, based upon the results of recent priority pollutant tests conducted in 2001, NSD has determined it will be unable to achieve immediate compliance with the new proposed effluent limits under the California Toxics Rule (CTR). Specifically, the NSD has exceeded effluent CTR limits for selenium, thallium, and copper. As a result, the District requires additional assistance with the characterization and source identification of elevated priority pollutant levels at the plant. Due to the high groundwater table in the vicinity of the plant, the District speculates the source of elevated metals concentrations may be due to local groundwater infiltration into the collection system. Treated and disinfected effluent from the plant is discharged into the "R" Drain, which flows directly into the Salton Sea.

NSD recently requested a five-year compliance schedule from the California Regional Water Quality Control Board, Colorado River Basin Region, to attain compliance with new, more stringent effluent limits in the upcoming National Pollutant Discharge Elimination System (NPDES) Permit that will be based on CTR criteria. Project components during this five-year schedule include the following:

- Quarterly influent and effluent priority pollutant monitoring
- Testing and assessment of District areas that may be contributing to high pollutant levels
- Begin review of collection system and testing of groundwater infiltration into the plant for pollutant levels
- Produce an accurate map and survey of collection system
- Implement any recommended repairs of the collection system

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of improvements and rehabilitation of the sanitary sewer collection system in the Colonia of Niland. These improvements will address the various leaks and breaks in the sewer system, and could also address current effluent limit exceedances at the NSD Wastewater Treatment Plant.

STUDIES NEEDED

In order to develop this project, the District needs to perform a closed-circuit television survey of the entire sewer collection system, which is comprised of approximately 32,000 lineal feet of four-inch pipe-line. This survey will produce an accurate map of the collection system, an evaluation of the condition of the system, and will make recommendations for any improvements and rehabilitation. A cost analysis for any improvements and rehabilitation recommended would also need to be performed.

In addition, the District needs to perform a groundwater infiltration study to determine the potential source(s) of elevated metals effluent concentrations at the plant. This study will determine whether groundwater infiltration into the sewer collection system is the cause of elevated levels of copper, selenium, and thallium at the plant's effluent discharge.

PROJECT LOCATION

The NSD wastewater treatment plant is located on the southwest side of Niland, at 125 West Allcott Road, approximately 42 miles north of the US-Mexico border. Niland has a population of approximately 1,100, with an average median per capita income of \$25,000.

PROJECT PROPONENT(S)

Niland Sanitary District

ESTIMATED COST

The estimated cost for the closed-circuit television survey is \$60,000.
The estimated cost for the groundwater infiltration study is \$60,000.
Total estimated cost for studies is \$120,000.

The estimated cost of improvements and rehabilitation to the sewer system will be known once studies are completed.



NILAND COLONIA WASTEWATER TREATMENT PLANT EFFLUENT IS DISCHARGED INTO THE "R" DRAIN SHOWN ABOVE. THIS DRAIN DISCHARGES TO THE SALTON SEA.

North Shore Colonia/Bombay Beach Colonia/ Community of Hot Mineral Spa **Rehabilitation of Water System**

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Coachella Valley Water District (CVWD) provides drinking water service to the Colonia of North Shore, the Colonia of Bombay Beach, and the community of Hot Mineral Spa. Two wells, located in the community of Mecca currently serve these areas. The source water gravity-flows through nine miles of an asbestos cement water line to a series of three water storage reservoirs in the Colonia of North Shore. The water is distributed to customers in North Shore through a network of four-inch, six-inch and eight-inch lines. From North Shore, water is then sent 33 miles south to the Colonia of Bombay Beach and to the community of Hot Mineral Spa, where it is distributed to costumers from two storage tanks in a network of four-inch, six-inch, and eight-inch water lines.

Numerous water leaks have occurred in the entire water distribution system. CVWD staff has reported approximately 15 leaks in the distribution system in North Shore, and one leak in the transmission main from one of the supply wells to North Shore. The District has repaired multiple leaks resulting in temporary shutdown of water service to portions of North Shore. This has not only impacted the community, but also reduced CVWD's ability to preserve optimal water pressure in the distribution system for emergency purposes, such as fire protection.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project consists of several major improvements and rehabilitations to address the leaks in the water system servicing the Colonia of Bombay Beach, the Colonia of North Shore and the community of Hot Mineral Spa. This project will insure more reliable water delivery to customers in these areas, and increase the reserve capacity for fire protection purposes.

Specifically, the proposed improvements and rehabilitation to the water system include:

- Review of the cathodic protection system along the main transmission line from the storage reservoir to North Shore and Bombay Beach.
- Installation of valves and blow-off lines to allow one of the supply wells to be dropped out of service for repairs.
- Replacement of 120 feet of leaking transmission main pipeline with new pipeline.
- Rehabilitation and/or replacement of 43 air release-vacuum valves along the entire main transmission pipeline.
- Rehabilitation and recoating of two storage reservoirs.
- Construction of a larger main pipeline from Bombay Beach to Hot Mineral Spa service area.
- Acquisition of a new site for a storage reservoir in Hot Mineral Spa.

STUDIES NEEDED

CVWD will need to prepare a preliminary engineering design, and associated environmental assessments for the work described above.

PROJECT LOCATION

North Shore is designated as an unincorporated colonia by Riverside County. It is located on the north-eastern shore of the Salton Sea, approximately 60 miles north of the U.S.-Mexico border. This project will benefit approximately 1,500 users in the colonia.

Bombay Beach and the Hot Mineral Spa areas are both unincorporated. They are located in northern Imperial County, on the eastern shore of the Salton Sea, approximately 50 miles north of the U.S.-Mexico border. Bombay Beach is designated as a colonia by Imperial County. The proposed project will benefit approximately 600 users in these two areas.

PROJECT PROPONENT(S)

Coachella Valley Water District is the lead project proponent. The Desert Alliance for Community Empowerment is an advocate for the Colonia of North Shore. Imperial County Community & Economic Development is advocate for the Colonia of Bombay Beach.

ESTIMATED COST

Total estimated cost of improvements, rehabilitation and associated studies is \$1,875,000.



SALTON SEA

Oasis Colonia

Construction of a Water System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health
- Riverside County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Currently, the Colonia of Oasis lacks a public water supply system. The private wells utilized by the community as a source of water do not meet acceptable water quality standards. Some of these wells exceed California Department of Health Services and US Environmental Protection Agency Maximum Contaminant Levels (MCLs) for arsenic, flouride, and Total Dissolved Solids, and produce water exceeding 95 degrees. Also, the supply well at the Oasis School contains levels of Arsenic and Flouride above state and Federal MCLs. In addition, aside from some individual private parcels, Oasis lacks an adequate pressurized water system or large storage facility to provide fire protection for its residents, including the students and employees at the Oasis school.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project involves the construction of a potable groundwater system for the Colonia of Oasis. Phase I of the project involves the construction of a series of wells, treatment facilities, and pumping stations in a high quality and productive well field located about 4 miles northwest of Oasis. (Valerie Jean) Phase I also includes the construction of a pipeline that will convey water from the wells to Oasis, and the construction of a water storage tank and a booster station within the community. Phase II involves the construction of a water distribution network within Oasis to serve the users. The proposed 13-mile, 18-inch transmission mainline will be constructed from the Valerie Jean wellfield to the Riverside/Imperial County line and will connect to the existing Salton City mainline. This transmission line would be used to convey water not only to Oasis, but also to the West Shores communities (see page 41).

STUDIES NEEDED

The Desert Alliance for Community Empowerment (DACE), an advocacy group representing the interests of Oasis, has completed a Draft Preliminary Engineering Report, dated March 2003, evaluating various alternatives for implementing a reliable drinking water system in Oasis. DACE is in the process of finalizing the report.

Additionally, studies such as an engineering design, an environmental analysis of the project, and a financial analysis of the community of Oasis' ability to finance improvements to the system, will be required.

PROJECT LOCATION

The unincorporated community of Oasis is a designated colonia in the County of Riverside, approximately 60 miles north of the US-Mexico Border. There are approximately 1,500 people who will benefit from the proposed project.

PROJECT PROPONENT(S)

The Coachella Valley Water District is the lead project proponent. The Desert Alliance for Community Empowerment is an advocate for the Colonia of Oasis.

ESTIMATED COST

The estimated cost of the project, including all studies, is \$6.1 million.

Ocotillo Colonia

Establishment of a Septic Management District

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Within the Colonia of Ocotillo, each residential unit owns and operates a septic tank system. Ocotillo, however, lacks an onsite septic management district to oversee the ongoing maintenance of these tanks. A majority of the residential units are located near two groundwater wellfields that serve the community. If the septic tanks are not adequately operated and maintained, sewage could potentially migrate and contaminate the local aquifer. The risk of aquifer contamination could be increased during the occasional heavy rains as the groundwater table rises.

TYPE OF PROJECT

Municipal Planning and Development

PROPOSED PROJECT

The proposed project involves the establishment of a septic management district to oversee the ongoing maintenance of the private septic tanks in the community of Ocotillo. This district would inspect and ensure the regular cleaning of these private systems.

STUDIES NEEDED

A financial planning analysis is needed to determine the appropriate method of revenue collection to adequately oversee the septic tank systems in Ocotillo.

PROJECT LOCATION

Ocotillo is designated a colonia by Imperial County. Ocotillo is located about 70 miles east of San Diego, and about 10 miles north of the U.S.-Mexico border. The entire population of Ocotillo, approximately 500, would benefit from the proposed project.

PROJECT PROPONENT(S)

The lead project proponents are the Ocotillo Mutual Water Company and the Coyote Valley Mutual Water Company.

ESTIMATED COST

The estimated cost for the study is \$25,000.

Ocotillo Colonia

Construction of a Water Connection Line

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Currently, two separate private non-profit water companies serve the Colonia of Ocotillo. Both water systems lack adequate water pressure for fire prevention. In addition, if one water system becomes non-operational as a result of an emergency or catastrophic event, water cannot be diverted from one system to the other in order to provide water to users without service.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project involves the installation of a water connection line that would link the two adjacent water systems, which service the Colonia of Ocotillo. This project will address both the need for additional water pressure in the system and the need for a back-up source of water during emergency situations.

STUDIES NEEDED

Preliminary and final engineering design will be needed for the water connection line. In addition, the two water companies will need to perform a financial analysis to determine adequate rates in order to maintain and operate the system upgrade.

PROJECT LOCATION

Ocotillo is designated a colonia by Imperial County. Ocotillo is located about 70 miles east of San Diego, and about 10 miles north of the US-Mexico border. The entire population of Ocotillo, approximately 500, would benefit from the interconnection of the two water systems.

PROJECT PROPONENT(S)

The lead project proponents are the Ocotillo Mutual Water Company and the Coyote Valley Mutual Water Company.

ESTIMATED COST

The estimated cost of the project including studies is \$540,000.

Pala Band of Mission Indians **Construction of a Gravity-flow Sewer Collection System**

AGENCY JURISDICTION

- US Environmental Protection Agency
- Pala Band of Mission Indians Environmental Protection Agency

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HUMAN HEALTH AND ENVIRONMENTAL NEED

Approximately 265 out of the 425 residences in the Pala Band of Mission Indians reservation are connected to private septic systems. These septic tanks were constructed in the 1920's, and the Pala Band of Mission Indians Environmental Protection Agency (Pala EPA) has documented leaks in the systems. During site inspections, Pala EPA representatives have observed raw sewage discharges, which are a public health threat to local residents. In addition, many residents often complain of the foul odors associated with these sewage discharges. Maintenance of these septic tanks is difficult since the tanks were not constructed with manhole risers, which facilitate system location.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project involves the installation of a gravity collection system to transport the sewage directly from the residences to the existing community wastewater treatment plant. The oxidation lagoon wastewater treatment system has the capacity to treat this additional sewage. The proposed sewage collection system will consist of the following components:

- 37,000 lineal feet of 8-inch sewer main
- 7,000 lineal feet of 4-inch sewer force main
- 117 sewer manholes
- 265 sewer laterals
- 8 sewage lift stations

STUDIES NEEDED

A Preliminary Engineering Report, dated November 1999, was prepared for the Pala Band of Mission Indians. The report evaluated several alternatives to address the contamination posed by the leaking septic systems, and made the recommendation to transport the sewage to Pala's Wastewater Treatment Plant.

A utility survey and geophysical evaluation will be needed before installing the underground sewage collection system at the Pala reservation.

PROJECT LOCATION

There are approximately 1,100 residents living in 425 homes on the Pala Reservation. The tribe is located in northwestern San Diego County, approximately 55 miles north of the U.S.-Mexico border. The residents of 265 homes would benefit from this project.

PROJECT PROPONENT(S)

Pala Band of Mission Indians Environmental Protection Agency

ESTIMATED COST

The estimated cost for the sewer collection system and needed studies is \$3,200,000.

Palo Verde Colonia

Looping of the Water Distribution System and Installation of New Water Meters

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Local Agency Formation Commission (LAFCO)
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Palo Verde County Water District provides municipal water service to approximately 174 customers in the Colonia of Palo Verde. The water distribution system is comprised of 6-inch and 8-inch asbestos cement water pipes and contains three separate sections where the lines come to a dead-end. Many residents who live near the dead-end sections of the line observe sediment in their water taps. The extra sediment accumulates in the lines near the dead-end sections where it has no room to escape. To remedy this problem, the District needs to open the end of the line, temporarily eliminate service to some residents, and flush the line with treated domestic water. However, this alternative can result in the use of a significant amount of treated domestic water, leaving less water available for the residents and for fire protection purposes.

Additionally, many of the District's water meters are close to 20 years old and do not correctly register the amount of water used by the community. Currently, many users pay only a flat fee for their water service.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT:

The District proposes to continually loop the three areas of the water distribution system where dead-end sections exist. Three new sections of 8-inch HDPE or PVC water pipe will be constructed to continually loop the water system. Two sections will be constructed to connect the system across the Palo Verde Lagoon, and one section to connect the system along 9th Avenue from Clark Way to Highway 78.

Additionally, the District proposes to purchase and install new water meters to replace selected meters that do not correctly measure the amount of water delivered to customers.

STUDIES NEEDED

In order to develop the proposed project, the following studies are needed:

- A Preliminary Design Planning Document for the three looping projects. This study will also include a ground survey and utility verification.
- An Environmental Impact Assessment Report of the three looping projects. The report will include recommendations for mitigation activities to compensate for any damages.
- A Geotechnical Investigation to assess the soil types and soil engineering characteristics.
- A User Rate Study to assist the community in determining how users can pay for future improvements to the water system.

PROJECT LOCATION

Palo Verde is designated as a colonia, and is located in the northeastern corner of Imperial County. It is adjacent to the Colorado River, and it is approximately 50 miles north of the U.S.-Mexico border. Approximately 500 people live in Palo Verde.

PROJECT PROPONENT(S)

Palo Verde County Water District

ESTIMATED COST

The estimated cost for construction of three new sections is \$550,000.

The estimated cost for the studies is \$102,000.

Total estimated cost including studies is \$652,000.



COLORADO RIVER NEAR IMPERIAL DAM. SOME OF THE COLORADO RIVER WATER USERS IN CALIFORNIA INCLUDE THE COACHELLA VALLEY WATER DISTRICT AND THE IMPERIAL AND PALO VERDE IRRIGATION DISTRICTS.

Poe Colonia

Paving of Roads

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Air Resources Board
- Imperial County Air Quality Control District

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Poe Colonia subdivision has approximately 25 residences. Recently, water and wastewater infrastructure improvements have been made. However, the existing streets remain unpaved and the resulting dust generated is a public health threat to local residents. In fact, the US Environmental Protection Agency (USEPA) recently designated Imperial County a moderate non-attainment area for dust or particulate matter-10 μ m (PM-10). Air pollution in the region has been attributed to exacerbating respiratory illnesses in children and the elderly.

TYPE OF PROJECT

Air Quality Improvement

PROPOSED PROJECT

The proposed project involves the design and construction of a new asphalt surface, base material and concrete curb, gutter and sidewalk for the Poe Colonia. The paving will reduce negative air quality impacts to PM-10 dust generation. The curb and gutter will improve the drainage of the streets and the sidewalk and will increase safety to pedestrians.

STUDIED NEEDED

Engineering design studies will be required for preparation of plans and specifications for construction. CEQA and possibly NEPA studies may also be required to address the environmental impacts.

PROJECT LOCATION

The Poe Colonia is located approximately 1.5 miles west of the City of Brawley and is located near the intersection of Cady Road and Kalin Road in the unincorporated area of Imperial County. The Poe Colonia has a population of approximately 160 people. The entire colonia's population will benefit from the project.

PROJECT PROPONENT(S)

Imperial County

ESTIMATED COST

The estimated cost for engineering, design and environmental documentation is \$ 90,000.
The estimated construction cost is \$ 715,000.
Total Cost is \$805,000.

Community of Salton City

Wastewater Treatment System Improvements

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin Region

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Salton Community Services District operates a wastewater treatment plant in Salton City, California. The operation is a percolation system. Ponding has occurred in low elevation areas within the property of the wastewater treatment plant. If not addressed, the District is concerned that this problem may extend to neighboring properties.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project consists of improvements to the wastewater treatment system in Salton City in order to address ponding.

STUDIES NEEDED

A feasibility study will be needed to identify and assess alternatives, and make recommendations for any improvements to the wastewater treatment system. A cost analysis will also need to be performed. The alternatives to be assessed include percolation at an alternate site, discharge to the Salton Sea, and water recycling. Preliminary and final engineering studies and environmental assessments will also be needed. In addition, the District has outdated plans for the current facility, which was constructed in the 1960s. As a result, new facility plans will need to be developed.

PROJECT LOCATION

The community of Salton City is located along the west shore of the Salton Sea, in Imperial County, approximately 50 miles north of the US-Mexico border, and 35 miles northwest of Brawley, California. The Salton City Wastewater Treatment Plant is located in the southeast corner of the City. The entire community of Salton City, with a population of approximately 1000 people, will benefit from the proposed project.

PROJECT PROPONENT(S)

Salton Community Services District

ESTIMATED COST

The estimated cost to perform all studies is \$150,000.
The estimated cost of improvements to the system will be known once studies are completed.

Tecate Colonia

Water System Rehabilitation

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- San Diego County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The public water system built to serve the Colonia of Tecate in the 1940s, is composed of failing water lines and a leaking water reservoir. Tecate Mutual Water District replaces an average of six leaks on the water distribution system every year. Many lines are shallow and exposed to surface hazards such as vehicle traffic. The 10,000-gallon storage reservoir sustains several leaks and overflows a year.

As a result of the aging water infrastructure, the community of Tecate is often without reliable water service. The community is comprised of many low-income families, and given the small service area (approximately 20 residential and commercial customers combined), there is little revenue to improve the water system.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project involves the review and rehabilitation of the water system in Tecate, California. In addition, the project involves the rehabilitation or replacement of the water storage tank.

STUDIES NEEDED

A closed circuit television survey of the water distribution system will be needed. This survey will produce an accurate map of the distribution system, an evaluation of the condition of the system, and make recommendations for any improvements and rehabilitation.

Additionally, a feasibility study will be needed to determine the optimal size of the storage reservoir in order to meet peak demand. A cost analysis for any improvements and rehabilitation recommended would also need to be performed.

PROJECT LOCATION

Tecate is located approximately 40 miles southwest of San Diego, and adjacent to the US-Mexico Border. The entire population of Tecate, California, approximately 150 people, would benefit from this project.

PROJECT PROPONENT(S)

The Tecate Vista Mutual Water Company will be the lead project proponent. The Tecate Vista Mutual Water Company is a private non-profit organization established to oversee the water system in Tecate.

ESTIMATED COST

The estimated cost of needed studies and the closed-circuit television survey is \$40,000.

The estimated cost of improvements and rehabilitation to the water system will be known once studies are completed.

West Shores Communities

Rehabilitation of Water System

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Imperial County

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Coachella Valley Water District (CVWD) operates two wells, water storage facilities, and the distribution infrastructure to supply potable water to the communities of Salton City, Desert Shores, and Salton Sea Beach (West Shores). The California Department of Health Services has documented numerous water main breaks and leaks in the water distribution system for these communities. According to CVWD, over 100 leaks or breaks have occurred in the water distribution network for the above communities from 1995 to 1998.

Additionally, the water system does not have sufficient storage and production capacity to meet peak water demands in Salton City, Salton Sea Beach, and Desert Shores during the summertime, or when supply is interrupted due to repairs. The rate of groundwater extraction in the wellfield that serves these areas exceeds recharge, and consequently the aquifer is being depleted.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

To remedy the problems that are associated with the leaking water transmission infrastructure, CVWD proposes the following improvements to the water system:

- Replace and relocate 15 continually leaking main water transmission line sections.
- Replace pump components.
- Rehabilitate or replace two pressure-reducing stations.
- Install pipeline extensions to serve new users.
- Recoat and rehabilitate water storage reservoirs.



SALTON SEA BEACH MARINA LOCATED ON THE WEST SHORE OF THE SALTON SEA.

To remedy the problem associated with a rapidly depleted water supply source, CVWD proposes the following:

- Obtain access and drill new wells north of the existing wellfield at Valerie Jean. The proposed Valerie Jean wellfield will replace the existing water supply wellfield, which is rapidly being depleted. In addition, a treatment system (arsenic treatment and disinfection) will be installed to treat groundwater from the Valerie Jean wellfield before distribution. Well pumping equipment will also be procured and installed.
- Install 13 miles of 18-inch transmission mainline from the proposed Valerie Jean wellfield at Highway 86 S to the Imperial/Riverside county line. This transmission line will connect to the existing Salton City mainline.

STUDIES NEEDED

NA

PROJECT LOCATION

The communities of Desert Shores, Salton City and Salton Sea Beach are located along the west shore of the Salton Sea, in Imperial County, approximately 50 miles north of the US-Mexico border. Salton Sea Beach is a designated colonia in Imperial County. The project will benefit the residents of all three communities, which have a combined population of 2,200, and about 1,360 connections.

PROJECT PROPONENT(S)

Coachella Valley Water District.

ESTIMATED COST

The total estimated cost is \$13.8 million.

City of Westmorland **Development of a Service Area Plan**

AGENCY JURISDICTION

- US Environmental Protection Agency
- Local Agency Formation Commission
- Imperial County

FOR INFORMATION CONTACT

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Westmorland lacks a Service Area Plan. As required by California State Legislation, the City must submit a Service Area Plan to the Local Agency Formation Commission (LAFCO) by January 1, 2005. A Service Area Plan is a municipal planning document that can assist a community in mitigating the negative impacts to the environment and public health as a result of current activity (such as NAFTA-generated truck traffic) and future development and growth.

TYPE OF PROJECT

Municipal Planning and Development

PROPOSED PROJECT

The proposed project involves the development of Service Area Plan for the City of Westmorland. This municipal planning document would consist of an environmental analysis, engineering analysis, infrastructure cost study, and financial analysis. In addition, an impact fee study and ordinance would need to be prepared in order to implement mitigation measures proposed in the plan.

STUDIES NEEDED

NA

PROJECT LOCATION

The project would cover the City as well as portions of the County surrounding the City, which would be included in the City's urbanized planning area. The population to benefit from this project is approximately 2,200.

PROJECT PROPONENT(S)

City of Westmorland

ESTIMATED COST

The estimated cost is \$200,000.

City of Westmorland

Road Paving

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Air Resources Board
- Imperial County Air Pollution Control District

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Westmorland, a rural community with a median household income of \$23,365, receives limited funds for road improvements. The City has some unpaved streets and some partially improved streets. During dry weather, vehicles traveling in the unpaved roads generate dust. The resulting dust generated is a public health threat to local residents. The US Environmental Protection Agency (USEPA) recently designated Imperial County a moderate non-attainment area for dust or particulate matter-10 micrometers (PM-10).

TYPE OF PROJECT

Air Quality Improvement

PROPOSED PROJECT

The proposed project involves the design and construction of a new asphalt surface, base material and concrete curb, gutter and sidewalk for the City of Westmorland's unpaved and partially improved streets. Approximately 5 miles of roads will be paved. The paving will reduce negative air quality impacts to PM-10 dust generation. The curb and gutter will improve the drainage of the streets and the sidewalk will increase safety to pedestrians. Paving streets can contribute to improved air quality by reducing PM 10 generation.

STUDIES NEEDED

Plans and studies needed to implement the project are: 1) preliminary engineering and planning studies, 2) environmental assessment and, 3) preparation of plans, specifications, and cost estimate.

PROJECT LOCATION

The project is located in various portions of the City as well as some road segments adjoining the city limits within Imperial County. The population to benefit from the proposed project is approximately 2,200.

PROJECT PROPONENT(S)

The City of Westmorland will be the lead agency for the project. For areas within the county, both the City and Imperial County would participate.

ESTIMATED COST

The estimated cost for studies/design of the project is \$350,000.
The estimate for construction of the road improvements is \$3,500,000.
Total Cost is \$3,850,000.

City of Westmorland **Wetland Construction and Wastewater Reuse Project**

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Regional Water Quality Control Board-Colorado River Basin

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HUMAN HEALTH AND ENVIRONMENTAL NEED

The City of Westmorland currently injects chlorine followed by dechlorination to eliminate coliform in the effluent from the City's Wastewater Treatment Plant (WWTP). The City's WWTP, however, has in some instances exceeded the effluent limit for e.coli. Treated and disinfected effluent ultimately reaches the Salton Sea. The City of Westmorland is interested in reducing its contribution of pollutant loads into the Salton Sea through the construction of a wetland. In addition, the City would like to reclaim treated effluent from its WWTP for irrigation purposes.

TYPE OF PROJECT

Wastewater Treatment

PROPOSED PROJECT

The proposed project has a twofold objective. The first objective is to eliminate the chemical dosing of the City of Westmorland Wastewater Treatment Plant's effluent through the construction of a wetland. The constructed wetland will remove coliform through biological, rather than chemical treatment, and thus reduce the chemical load in the water reaching the Salton Sea. The second objective is to reclaim and reuse the effluent from the treatment process for irrigation purposes by either returning the reclaimed water to the irrigation canal system or by constructing a reclaimed water distribution pipe system.

STUDIES NEEDED

The City has completed mapping of the site. The map includes topographical features as well as elevation contours. The City now requires assistance with: 1) preliminary engineering and planning studies, 2) environmental assessment, 3) long-term financial analysis, and 4) design of wetland/ park plan.

PROJECT LOCATION

The project will be located at the northwest corner of the City of Westmorland. The population to benefit from this proposed project is approximately 2,200.

PROJECT PROPONENT(S)

City of Westmorland

ESTIMATED COST

The estimated cost for the studies, assessments and design of the project is \$300,000.

The estimated cost for construction of the wetland is \$2,000,000.

The estimate for construction of the reclamation/reuse system to return the water to the irrigation canal system is \$800,000.

Alternatively, the cost to construct a reclaimed water pipe system is \$3,000,000.

Total Cost is \$3.1 million or \$6.1 million (for construction of a reclaimed water system).

Winterhaven Colonia

Replacement of Water Line Shut-off Valves

AGENCY JURISDICTION

- US Environmental Protection Agency
- California Department of Health Services
- Imperial County

FOR INFORMATION CONTACT

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Nicklaus Engineering, Inc.
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HUMAN HEALTH AND ENVIRONMENTAL NEED

The Winterhaven Water District has about 25 water line shut-off valves located throughout the public water system, which has about 175 connections. These shut-off valves are over 20 years old, and do not function properly. When a water leak is reported, the District must shut off a large portion of the water system because many times the shut-off valves in the immediate vicinity of the leak are not functioning properly. As a result, the District must stop delivery of water to a large number of customers in the Colonia of Winterhaven. In addition, the District is unable to maintain optimum water pressure for emergency response, such as fire protection.

TYPE OF PROJECT

Water Supply

PROPOSED PROJECT

The proposed project involves the replacement of 25 water line shut-off valves with new units, as the existing valves are old and not functioning properly.

STUDIES NEEDED

Historically, the rates in the Colonia of Winterhaven have been low, and the District has had difficulty in justifying a rate increase. A rate study is needed to determine how the community will pay for any future improvements to the water and sewer infrastructure, such as the cost to replace the water system shut-off valves.

PROJECT LOCATION

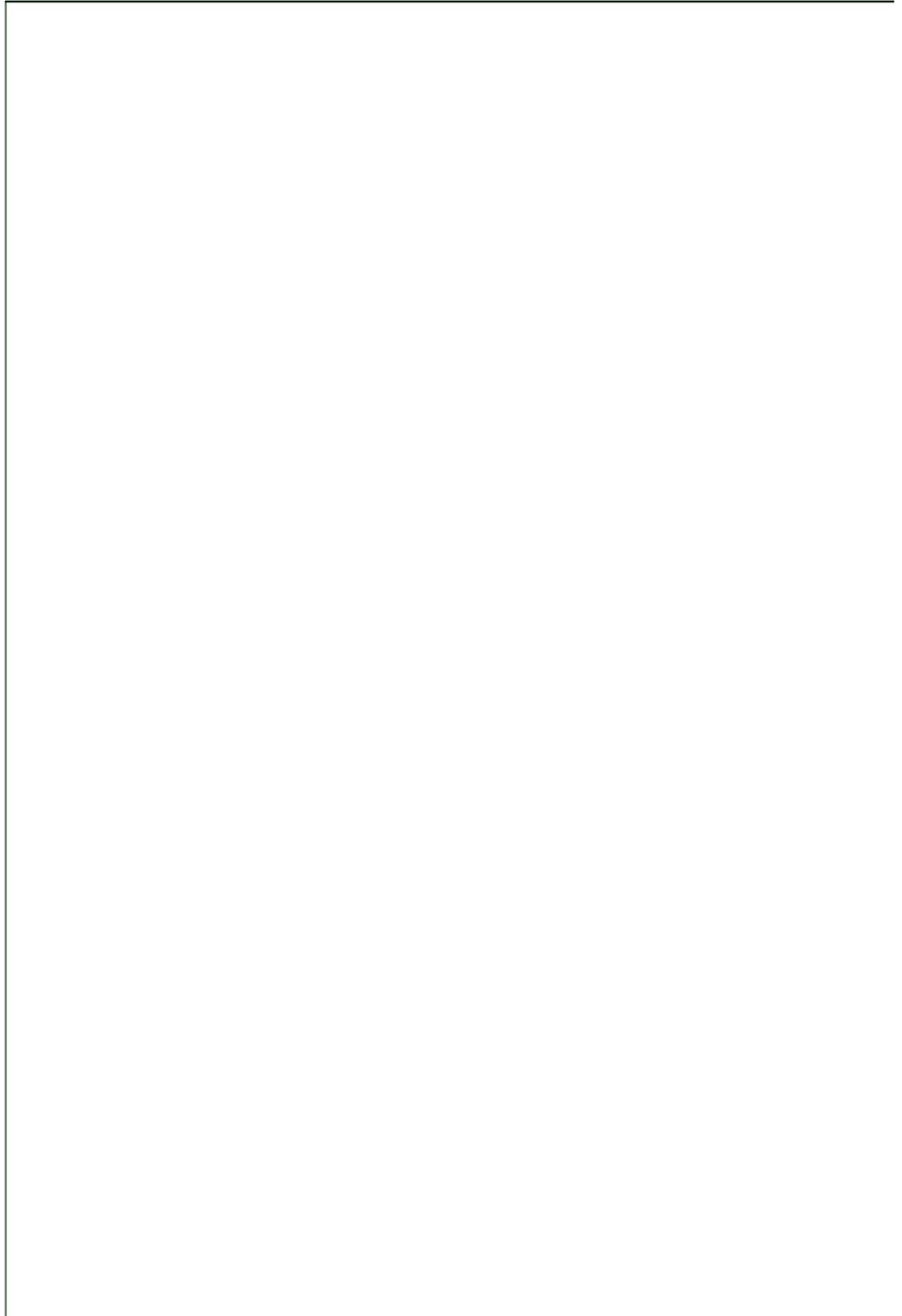
The Colonia of Winterhaven is located about 10 miles north of the US-Mexico border, in the southeast corner of Imperial County, directly across the Colorado River near Yuma, Arizona. The entire population of approximately 850 people will benefit from this project.

PROJECT PROPONENT(S)

Winterhaven Water District

ESTIMATED COST

The estimated cost for replacing 25 valves is \$6,250.
The estimated cost for the rate study is \$25,000.



PROYECTOS DEL ESTADO DE BAJA CALIFORNIA



Ciudad de Ensenada
**Construcción del Modulo de la Segunda Etapa
para PTAR-El Naranjo**

DEPENDENCIA(S) CON JURISDICCIÓN

- Comisión Nacional del Agua
- Comisión Estatal del Agua

PARA INFORMACIÓN CONTACTE:

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

La problemática a resolver es la determinación del tipo de sistema que mejore la calidad del agua tratada de la Planta de Tratamiento de Aguas Residuales (PTAR) el Naranjo, en cuanto a tecnología, equipamiento, y diseño, para implementarlo en la construcción de la Segunda Etapa de la Planta, evitando el riesgo de contaminación de la bahía y garantizando el reuso de aguas tratadas.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El proyecto cuenta con la selección de la mejor alternativa del sistema (bajo el principio de lodos activados) en cuanto a la tecnología (barrera total, contra corriente, zanjas de oxidación, etc.) y equipamiento, para cubrir la demanda de tratamiento proyectada y mejorar la calidad actual del agua tratada, evitando el riesgo de contaminación de la bahía pudiendo afectar la salud pública y garantizando el reuso en la agricultura, reinyección, industrias, áreas verdes, etc.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

- Evaluación de las alternativas de tratamiento bajo el principio de los lodos activados, manteniendo como fundamento un costo de operación bajo y una alta eficiencia de remoción de contaminantes.
- Proyecto ejecutivo de la alternativa o alternativas seleccionadas

UBICACIÓN DEL PROYECTO

En la ciudad de Ensenada, 300km sur de la frontera California-Baja California, dentro de las instalaciones de la Planta de Tratamiento del Naranjo.

PROMOTORES DEL PROYECTO

Comisión Estatal de Servicios Públicos de Ensenada

ESTIMACIÓN DEL COSTO

El costo del estudio de factibilidad es aproximadamente \$1,500,000 pesos. El costo de la construcción de la segunda etapa será determinado después de realizar los estudios necesarios.

Ciudad de Ensenada

Reuso de Agua Tratada

DEPENDENCIA(S) CON JURISDICCIÓN:

- Comisión Nacional del Agua
- Secretaría de Medio Ambiente y Recursos Naturales

PARA INFORMACIÓN CONTACTE:

C.P. MAURO BARRERA LÓPEZ
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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

La problemática a resolver es la reutilización sustentable del volumen tratado de aguas residuales generados por la Ciudad de Ensenada en la agricultura, la reinyección a los acuíferos y a la utilización directa por industrias, parques y jardines, hoteles, camellones, etc., para lograr una optimización del uso del agua blanca y a su vez recargar los mantos acuíferos susceptibles.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El proyecto cuenta con un análisis del mercado de aguas tratadas y red de distribución para el aprovechamiento sustentable de las mismas en la agricultura, la recreación (lagos artificiales), reinyección al subsuelo, industria de alto consumo, riego de áreas verdes, etc. Así como la planeación del crecimiento del mismo.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

- Estudio de factibilidad técnica y económica.
- Estudio hidráulico de las redes de distribución.
- Planeación de acuerdo a la aceptación y la demanda del agua tratada
- Estudios geológicos e hidrológicos del área de posible recarga.
- Estudio de la calidad necesaria del agua tratada para cumplir con las características que requiera la zona de recarga.
- Estudio de la tecnología necesaria para cumplir con la calidad requerida del agua tratada para la reinyección.

UBICACIÓN DEL PROYECTO

En la ciudad de Ensenada, 300km sur de la frontera California-Baja California, en áreas verdes, valles agrícolas, parques industriales, hoteles, y sitios viables para reinyección.

PROMOTORES DEL PROYECTO

Comisión Estatal de Servicios Públicos de Ensenada

ESTIMACIÓN DEL COSTO

El costo de los estudios es aproximadamente \$3,000,000 pesos. El costo de la tecnología adecuada para realizar la reutilización de agua tratada será determinado después de finalizar los estudios necesarios.

Ciudad de Ensenada

Reuso de los Biosólidos

DEPENDENCIA(S) CON JURISDICCIÓN

- Comisión Nacional del Agua
- Secretaría de Medio Ambiente y Recursos Naturales

PARA INFORMACIÓN CONTACTE

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

La problemática a resolver es la determinación de la tecnología más costeable, la aplicación más segura y la evaluación más certera de los biosólidos como mejorador de suelos para la agricultura.

TIPO DE PROYECTO

Manejo de Residuos Sólidos

PROYECTO PROPUESTO

Utilizar los biosólidos de desecho generados por las Plantas de Tratamiento de Aguas Residuales (PTARs) de la Ciudad de Ensenada para la aplicación de estos como mejoradores de suelo, utilizando las técnicas y tecnologías de composteo (maquinaria y equipo) y/o la deshidratación completa hasta llegar a los «pellets» como el caso de los deshidratadores por invernadero, hornos (convección forzada) u hornos de microondas; Evitando con esto la dispersión de microorganismos patógenos al aire o agua por los biosólidos dado el manejo y disposición actuales.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

- Evaluar las posibles alternativas que pudieran aplicarse incluyendo las tecnologías disponibles y los sitios factibles para la aplicación.
- Estudio de factibilidad técnica y económica
- Evaluación de la variedad de productos (forrajes, pastos, cítricos, granos, etc.) a los cuales se les podría aplicar (en la zona) y las técnicas de aplicación.

UBICACIÓN DEL PROYECTO

El proyecto se llevara a cabo en la Ciudad de Ensenada, 300km sur de la frontera California-Baja California. Los biosólidos se reutilizaran como mejoradores de suelos en los valles de Maneadero, Ojos Negros y Guadalupe.

PROMOTORES DEL PROYECTO

Comisión Estatal de Servicios Públicos de Ensenada

ESTIMACIÓN DEL COSTO

El costo para realizar los estudios necesarios es aproximadamente \$1,500,000 pesos. El costo de la tecnología necesaria para realizar la reutilización de los biosólidos será determinado después de finalizar los estudios. Actualmente se conoce que el costo para la deshidratación solar por invernadero de 23,000 toneladas (85% humedad) es aproximadamente \$25,000,000 pesos con un costo de operación anual aproximado de \$1,000,000 de pesos.

Ciudad de Ensenada

Implementación de un Sistema de Telemetría

DEPENDENCIA(S) CON JURISDICCIÓN

- Comisión Estatal de Servicios Públicos de Ensenada

PARA INFORMACIÓN CONTACTE

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

El sistema de agua potable actualmente no cuenta con ninguna medida para indicadores en pérdidas de agua, así mismo no se lleva un control de pérdidas físicas, en cuanto a fugas, tomas clandestinas y robo de agua, provocando con esto en algunas ocasiones desbaste en algunas colonias.

TIPO DE PROYECTO

Abastecimiento de agua

PROYECTO PROPUESTO

El proyecto propuesto cuenta con la instalación de un sistema de telemetría para el monitoreo confiable en tanques de regulación y redes de distribución para conocer las pérdidas en la distribución y conducción, así como tomas clandestinas de agua potable. El proyecto cuenta con el monitoreo sobre la base de la macromedición y la instalación de medidores electrónicos y/o macrometers.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Ninguno.

UBICACIÓN DEL PROYECTO

El sistema de telemetría se instalaría en zonas de abastecimiento, tanques reguladores y redes de distribución en el centro de la población de la Ciudad de Ensenada. Adicionalmente, se analizarán las presiones en zonas altas y bajas.

PROMOTORES DEL PROYECTO

Comisión Estatal de Servicios Públicos de Ensenada

ESTIMACIÓN DEL COSTO

El costo para la implementación de un sistema de telemetría es aproximadamente \$60,000 pesos.

Ciudad de Ensenada

Construcción de un Laboratorio Diagnóstico de la Calidad de Agua

DEPENDENCIA(S) CON JURISDICCIÓN:

- La Universidad Autónoma de Baja California

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

La contaminación marina en México es un problema que data de hace muchos años. La práctica común de descargar desechos domésticos e industriales al mar sin tratamiento adecuado ha contribuido significativamente al deterioro de los mares nacionales, teniendo como consecuencia numerosos problemas en la zona costera, manifestados en la pérdida de cualidades y calidades estéticas y bióticas. El cuerpo de agua receptor recibe de manera constante descargas provenientes de numerosas fuentes como precipitación pluvial y por infiltración de riego, así como por fuentes más obvias como por drenaje, plantas de tratamiento y la industria. La contaminación del agua es provocada principalmente por la adición de una serie de contaminantes (metales pesados, pesticidas, materia orgánica, microorganismos patógenos) a los cuerpos receptores mediante esas descargas. Todo cuerpo de agua tiene la capacidad de asimilar cierto grado de contaminación sin que ésta cause efectos de consideración, dependiendo de la dilución y factores de auto purificación del agua receptora (Tebbutt, 1992. Sin embargo, si la contaminación incrementa, la naturaleza del agua receptora se verá alterada y su utilidad para varios usos se vería afectada de manera negativa.

La Bahía de Todos Santos (BTS) en la ciudad de Ensenada, Baja California, no ha sido la excepción al deterioro ambiental. Desde 1979, la Secretaría de Salubridad y Asistencia (SSA) concluyó que la contaminación del agua en la Bahía de Todos Santos se debía principalmente al vertimiento de desechos orgánicos, tanto domésticos como industriales, ya que no se contaba con la infraestructura necesaria para el tratamiento de dichos efluentes (SSA, 1979. Un estudio por parte del Instituto de Investigaciones Oceanológicas de la Universidad Autónoma de Baja California en 1985 reveló que la parte norte y central de la bahía estaban fuertemente contaminados por material orgánico y bacterias (Sañudo-Wihelmy *et al.*, 1985), con valores máximos en el verano y mínimos durante el invierno, en concordancia con la producción pesquera local y el flujo turístico. En 1972 se inició la construcción de la planta de tratamiento de aguas residuales de El Gallo con el objeto de aminorar la contaminación a la bahía proveniente del arroyo El Gallo. Sin embargo, la sobrecarga constante a la que se vio sujeta la planta provocaron su mal funcionamiento y tratamiento deficiente y en la década de los ochentas el arroyo fue identificado como la principal fuente de contaminación de la zona costera en la región (Sañudo-Wihelmy *et al.*, 1985) debido a que en su lecho tendían a converger las aguas residuales de la industria pesquera asentada en la zona y las aguas residuales municipales colectadas en la planta de tratamiento de la Comisión Estatal de Servicios Públicos de Ensenada (CESPE). Tal contaminación provocó el deterioro de playas arenosas inicialmente consideradas como seguras para usos recreativos, teniendo como consecuencia un impacto negativo en las actividades turísticas de la bahía y en la de sus habitantes.

La contaminación en el norte de la bahía se vio disminuida con el cese de actividades de las industrias procesadoras de pescado Zapata y Pesquera Pacífico, las cuales eran las mayores del país en cuanto a su producción (Sañudo-Wihelmy *et al.*, 1985). De igual manera, con la construcción y puesta en marcha de la planta de tratamiento de aguas residuales de El Sauzal se captaron las aguas generadas por la población de El Sauzal de Rodríguez y la del sector poniente de la ciudad de Ensenada, que antes eran descargadas sin tratamiento previo a la zona de La Playita.

Por otra parte, la contaminación en la región central de la bahía ha disminuido también como resultado de la reciente decisión conjunta por parte de la SEMARNAP y de la Comisión Nacional del Agua de negarle a los industriales la posibilidad de descargar sus aguas residuales directamente en el lecho del arroyo El Gallo. Asimismo, el gobierno federal ha construido una nueva planta de tratamiento (El Naranja) para incrementar la capacidad total de tratamiento de aguas residuales de la ciudad. La puesta en operación de la nueva planta, a finales de 1999, ha permitido que la antigua planta existente (El Gallo) reciba volúmenes de agua correspondientes a su diseño inicial (aproximadamente 300 litros por segundo - lps) por lo que la eficiencia de su tratamiento se ha incrementado considerablemente. A su vez, la planta de tratamiento de El Naranja ha tratado un promedio de 400 lps y obtenido efluentes de alta calidad, con

valores de materia orgánica medida como demanda bioquímica de oxígeno (DBO) y de sólidos suspendidos (SS) menores de 30 mg/l, por debajo de los límites máximos permitidos por la norma oficial mexicana correspondiente (NOM-001-ECOL-1996).

La eficiencia en el tratamiento de las aguas residuales de la ciudad ha ocasionado que disminuya la concentración de materia orgánica y de otros contaminantes en el agua residual que descarga al medio marino. Sin embargo, debido a los volúmenes de aguas residuales vertidos a la bahía, la carga de dichos contaminantes es aún considerable. Actualmente se ha puesto énfasis en la necesidad de reutilizar las aguas residuales tratadas con lo que se obtendrían dos beneficios: 1) aprovechar de manera más eficiente un recurso escaso en la región y, 2) evitar la descarga de aguas residuales al medio marino. Es de esperarse que estas acciones tengan un impacto positivo sobre la calidad del agua de la Bahía de Todos Santos.

Con el fin de hacer cuantificables y medibles los cambios en las concentraciones de contaminantes en la Bahía de Todos Santos, es necesario establecer un programa de monitoreo permanentemente de la calidad sanitaria del agua de la BTS. La importancia del programa radica en lo novedoso del mismo. A nuestro conocimiento, en toda la República Mexicana no existe un programa parecido, por lo que la ciudad de Ensenada se colocaría a la vanguardia en el estudio de la calidad del agua de mar. Si se considera que Ensenada es la única ciudad en México que trata el 100% de sus aguas residuales, es natural dar el siguiente paso y evaluar la manera en que las medias tomadas al respecto impacten de manera benéfica sobre el cuerpo de agua receptor (la BTS). La comunidad ensenadense sería la beneficiada inmediata al contar con información actualizada periódicamente sobre la calidad del litoral de la bahía usada para explotación pesquera y recreación turística.

TIPO DE PROYECTO

Abastecimiento de Agua- prevención de la contaminación del agua, proyecto para mejorar o restaurar la calidad de los recursos hidráulicos

PROYECTO PROPUESTO

Como se mencionó con anterioridad, existe la necesidad de establecer un programa de monitoreo de la calidad sanitaria de la Bahía Todos Santos (BTS) en Ensenada, Baja California, con el fin de determinar la calidad del litoral de la bahía usadas para explotación pesquera y recreación turística. Debido a la compatibilidad con algunos parámetros a analizar, el laboratorio incluirá el monitoreo de aguas residuales y de aguas potables.

Para ello, es necesario contar con un laboratorio acreditado por la Entidad Mexicana de Acreditación (EMA), acreditación mediante la cual se garantice la calidad de los resultados emitidos por el laboratorio. Actualmente el Laboratorio de Calidad del Agua del IIO cuenta con certificación ISO 9001:2000 en diversos parámetros que, sin embargo, no abarcan a todos los requeridos por las normas ambientales mexicanas.

El presente proyecto plantea, por lo tanto, la construcción de *Nuevas instalaciones* un Laboratorio de Diagnóstico de la Calidad del Agua a cargo del Instituto de Investigaciones Oceanológicas de la UABC.

Actualmente en todo el estado de Baja California no existe un laboratorio de estas características acreditado por EMA. Por lo tanto, las empresas que requieren de estos servicios deben contratar laboratorios de otros lugares, ocasionando el encarecimiento del servicio. El laboratorio aquí planteado, por lo tanto, beneficiaría a un amplio sector productivo del estado.

Los parámetros que se analizarán en el laboratorio serán los estipulados por la NOM-001-SEMARNAT-1996 y la NOM-127-SSA1-1994.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Se requiere estudio arquitectónico y la construcción de la infraestructura.

UBICACIÓN DEL PROYECTO

El laboratorio estaría ubicado en el Instituto de Investigaciones Oceanológicas de la UABC en Ensenada. El laboratorio tendría un impacto regional, ya que los estados de Sonora y Baja California Sur no cuentan con laboratorios acreditados en el sector agua.

PROMOTORES DEL PROYECTO

Universidad Autónoma de Baja California

ESTIMACION DEL COSTO

GASTO DE INVERSIÓN	TOTAL pesos (\$)
INFRAESTRUCTURA (laboratorio)	400,000.00
EQUIPO Y MATERIAL DE LABORATORIO EXISTENTE	632,495.60
EQUIPO Y MATERIAL DE LABORATORIO REQUERIDO	1,092,572.25
TOTAL:	2,125,070.85
MONTO REQUERIDO	1,492,575.25

Ciudad de Ensenada

Uso Sustentable del Acuífero de Maneadero

Reuso de Aguas Residuales Tratadas

DEPENDENCIA(S) CON JURISDICCIÓN:

- La Comisión Nacional del Agua
- La Comisión Estatal del Agua
- La Comisión Estatal de Servicios Públicos de Ensenada (CESPE)
- El Comité Técnico de Aguas Subterráneas (COTAS) del valle de Maneadero
- La SEMARNAT
- Con el apoyo del CICESE
- Organizaciones no gubernamentales
- Asociaciones civiles y de la Universidad Autónoma de Baja California

PARA INFORMACIÓN CONTACTE:

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

La ciudad de Ensenada, ubicada en la costa al Pacífico de Baja California, por sus condiciones climáticas y geográficas, no dispone de fuentes de agua superficial para satisfacer la demanda. El abastecimiento de agua potable, esta condicionado al buen manejo de los recursos hidráulicos subterráneos que se encuentran en los mantos acuíferos.

El acuífero del valle de Maneadero, tiene un enorme potencial para Ensenada, como fuente de abastecimiento de agua potable para los diferentes usos y como almacén estratégico para afrontar condiciones climáticas desfavorables por períodos prolongados. Esto requiere un manejo integral de los recursos hidráulicos disponibles, con base en información técnica actualizada y la participación y compromiso de todos los sectores involucrados.

Los usos actuales del agua del acuífero son principalmente abastecimiento urbano y producción agrícola, ambos sectores -urbano y agrícola- requieren evaluar con certeza la disponibilidad real del recurso, para planear su desarrollo.

El acuífero del valle de Maneadero manifiesta en la actualidad síntomas muy graves de que el aprovechamiento de las aguas no es sustentable. Con los datos existentes se estima que las extracciones son del orden del 23 % superiores a la cuota de recarga del acuífero y han producido abatimientos en los niveles freáticos hasta de 12 m. Esto ha ocasionado que en algunos sitios la intrusión del agua del mar ha elevado la salinidad del agua subterránea hasta concentraciones superiores a las 6000 PPM.

La situación en el valle indica que la sobreexplotación estimada es de 4.9 millones de metros cúbicos por año. Esto ha ocasionado efectos negativos como la pérdida de productividad de 1,200 hectáreas y la degradación de la calidad del agua para el abastecimiento público urbano. La situación se agrava con el tiempo, las acciones que se requiere implementar deben detener el deterioro progresivo de las condiciones actuales y proveer un plan de manejo que asegure la sustentabilidad del aprovechamiento del acuífero del valle de Maneadero.

Ante esta situación la Comisión Nacional del Agua, CNA convocó a expertos y personas interesadas en el problema y su solución, para aplicar la metodología de planeación dinámica (ZOPP) y analizar en forma minuciosa cada uno de los factores que inciden en el problema, así como las acciones concretas para su solución.

El grupo especializado de trabajo GET se integró por usuarios del COTAS de Maneadero, representantes de la Gerencia Regional de CNA, SAGARPA, SFA, CESPE, COPARMEX, consultores del ramo, así como investigadores y especialistas de la UABC y del Centro de Investigación Científica y de Educación Superior de Ensenada CICESE.

El material que se presenta en esta propuesta plantea en resumen el diagnóstico del problema, las alternativas de solución y las actividades a desarrollar, con una visión de los principales objetivos, los resultados esperados, la calendarización y el monto de la inversión requerida para su ejecución.

TIPO DE PROYECTO

Tratamiento de aguas residuales (sistemas para el reuso del agua)

PROYECTO PROPUESTO

El problema de la sobreexplotación del acuífero solo se puede resolver mediante el manejo integral de los recursos hidráulicos que propicie, por un lado, la reducción del volumen de bombeo y por otro, el incre

mento de la recarga. El GET ha analizado las alternativas de solución y se han identificado acciones concretas y propuestas específicas:

- Uso del agua tratada en el riego agrícola, en cultivos que así lo permita la normatividad vigente.
- Reinyección de las aguas tratadas al subsuelo, para la recarga del acuífero.
- Descarga de aguas tratadas en la parte alta de los arroyos San Carlos y Las Animas.
- Control del volumen y calidad del agua extraída de los pozos para los diferentes usos.

La implementación de estas acciones involucra diferentes aspectos que van desde la organización de los agricultores a través del COTAS y Comisariado Ejidal, el diagnóstico, la evaluación técnica y el monitoreo de las condiciones geohidrológicas y el estudio de factibilidad y proyecto ejecutivo para el reúso de las aguas residuales tratadas de la Planta el Naranja. Las acciones se agrupan en 6 objetivos superiores descritos en la tabla anexa (I).

Recarga del Acuífero

La ciudad de Ensenada se abastece de agua de cuatro acuíferos, de los cuales Maneadero aporta el 30% de disponibilidad actual, la cual promedia 790 litros por segunda (lps). La demanda de crecimiento para el año 2006 es de 860 lps, sin que existan fuentes alternas de suministro de bajo costo. Actualmente la ciudad dispone de 9 millones de metros cúbicos anuales asignados de la Mesa Arenosa, de San Luis Río Colorado, Sonora. Sin embargo, se requiere implementar su infraestructura para llevar el agua de Mexicali a Ensenada.

Con el proyecto de reinyección de aguas debidamente tratadas se lograría estabilizar el acuífero, frenando el avance de la intrusión salina y la degradación de la calidad, recuperar el acuífero a mediano y largo plazo, mantener el régimen productivo del valle y garantizar la sustentabilidad y el uso de la tecnología de riego de punta existente en el valle. Se podrá disponer de por lo menos de 100 lps de agua adicional para uso público urbano.

La infraestructura de cabecera para la conducción será aprovechada para los proyectos de reinyección y riego agrícola.

Riego Agrícola

Con el uso del agua tratada en la agricultura, en el corto y mediano plazo será posible reincorporar 1,000 hectáreas a la actividad productiva con cultivos rentables; los efectos favorables de esta actividad son que se conserva la frontera agrícola, se mejora los niveles de recuperación y de ingresos de la población de Maneadero, se mantiene el arraigo de los agricultores a la producción de la tierra, prolongando el potencial agrícola del valle, se frena la extracción de agua subterránea de mala calidad, con lo cual se detiene el abatimiento y el proceso de intrusión salina, favoreciendo de manera complementaria la recuperación del acuífero. Los productos agrícolas de mayor rentabilidad, que exigen agua de alta calidad, disminuirán su costo de producción al disponer de agua de mejor calidad que el agua subterránea salina que llega a 6,000 y 8,000 de ppm.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

A excepción de los proyectos institucionales, todos los proyectos que se mencionan a continuación requieren de programación de la inversión.

Regulación y Organización

Se cuenta con gran cantidad de información que debe ser recopilada, analizada y ordenada en un Sistema de Información Geográfico (SIG) moderno y eficiente. Por otro lado, es prioritario reglamentar la extracción, uso y aprovechamiento del agua subterránea para evitar una mayor sobreexplotación tendiendo a la estabilización y una eventual recuperación del acuífero.

Es necesario conocer con certeza los volúmenes de extracción. Esto se logra únicamente con la instalación de sistemas de medición y un programa de control de extracciones que requiere la participación de los usuarios, por lo que es necesario fortalecer los Consejos de Cuenca de Aguas subterráneas (COTAS). Para lograr lo anterior, se requiere llevar a cabo las siguientes acciones:

Actividad	Costo (miles de pesos)
Reglamentación	70.00
Programa de fortalecimiento del COTAS	100.00
Sistema de Información Geográfica	500.00
Control de Extracciones	300.00
Instalación de Medidores	2,500.00
TOTALES	3,470.00

Diagnóstico y Evaluación Técnica

Implementar un proyecto de inducción o recarga de agua residual tratada, requiere de un conocimiento preciso del acuífero en cuanto a su geometría, geología, comportamiento hidrodinámico, en resumen, de todas las variables geohidrológicas que permitan implementar el modelo matemático, simulando diferentes escenarios, para determinar un Plan de Manejo óptimo.

Lo que permitirá diseñar las características de la obra de recarga o bien de extracción de agua recuperada incluso para uso público urbano. Se propone establecer una red de monitoreo sistemático para evaluar permanentemente el comportamiento del acuífero y la calidad del agua. Para llevar a cabo lo anterior se requiere llevar a cabo los siguientes estudios:

Actividad	Costo (miles de pesos)
Programa de control de descargas	500.00
Monitoreo calidad del agua residual tratada	320.00
Monitoreo microbiológico	140.00
Monitoreo de parámetros geoquímicos	350.00
Implementación del modelo matemático	300.00
Inventario de aprovechamientos	180.00
Elaboración de pruebas de bombeo	450.00
Estudios geofísicos y geológicos	530.00
Instalación de estaciones climatológicas	140.00
Instalación de estaciones hidrométricas	100.00
Red de Monitoreo	655.00
Perforación de piezómetros	500.00
TOTALES	5,115.00

Diagnóstico de Reuso de Aguas Residuales Tratadas

La actualización incluye la factibilidad económica del recurso de agua tratada, el diagnóstico y alternativas de usos agrícolas, reinyección y usos urbanos.

Actividad	Costo (miles de pesos)
Actualización del estudio de factibilidad y proyecto ejecutivo para el reuso de aguas residuales tratadas de la planta de tratamiento El Gallo – El Naranjo. Incluye reinyección al acuífero.	800.00
TOTALES	800.00

Infraestructura

Actualmente, CESPE cuenta con una propuesta de reuso de las aguas tratadas de la planta de tratamiento de El Naranjo con aplicación en recarga y riego agrícola. Dicha propuesta tiene un costo aproximado de 108 millones de pesos contemplando una línea de conducción a gravedad de 24 pulgadas de diámetro con fines de irrigación. El nuevo proyecto de actualización debe considerar, al igual que esta propuesta, tanto recarga como riego agrícola, por lo que se considera que los costos presentados sirven como punto de referencia para considerar la magnitud de los montos de inversión que se requieren para este fin.

En cuanto a las líneas de distribución interparcelaria, zona de riego por compuertas y red de drenaje se tiene contemplado beneficiar una superficie de 470 hectáreas en su primera etapa, requiriéndose de una inversión de \$10,340,000 pesos, y contemplando en el mediano plazo alcanzar las 1,000 hectáreas.

Actividad	Costo (miles de pesos)
Línea de conducción y distribución	108,000.00
Distribución parcelaria e infraestructura de riego	10,340.00
TOTALES	119,840.00

UBICACIÓN DEL PROYECTO

La ciudad de Ensenada y el valle de Maneadero.

PROMOTORES DEL PROYECTO

Universidad Autónoma de Baja California

ESTIMACION DEL COSTO

Rubro	Costo (miles de pesos)
Regulación y organización	3,470.00
Diagnóstico y Evaluación Técnica	5,115.00
Diagnóstico del Reuso de Aguas Residuales Tratadas	800.00
Infraestructura	119,840.00
TOTALES	129,225.00

Tabla I

Proyecto para el Uso Sustentable del Acuífero de Maneadero

Objetivos superiores

Mejorar la eficiencia en la distribución del agua y su uso; reuso de aguas residuales	Cumplimiento de los volúmenes concesionados	Contar con un Plan de Manejo del Acuífero*	Mejora en el uso y manejo de los sistemas de riego	Recargar de manera suficiente el acuífero	Disponer de recursos suficientes para el manejo sustentable del recurso
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Para cumplir con los 6 objetivos superiores, se propusieron 33 actividades y 83 sub-actividades

El Grupo Especializado de Trabajo GET, mediante consenso institucional ha seleccionado las siguientes acciones prioritarias

<ul style="list-style-type: none"> • Reuso de aguas tratadas en irrigación de productos agrícolas • Definición del uso del agua y suelo • Monitoreo de la calidad del agua residual 	<ul style="list-style-type: none"> • Macro y micro medición • Cumplimiento de asignaciones y concesiones • Pago del agua en la agricultura 	<ul style="list-style-type: none"> • Plan de manejo del acuífero • Estudios técnicos sistemáticos • Sistema de información integral • Determinación del padrón de usuarios • Reglamentación del acuífero 	<ul style="list-style-type: none"> • Mejoramiento de la infraestructura hidroagrícola 	<ul style="list-style-type: none"> • Obras de recarga • Recarga de aguas residuales al acuífero • Calidad del agua residual • Demarcación de zonas federales • Regulación de extracción de materiales pétreos. 	<ul style="list-style-type: none"> • Exponer ante el Grupo de Seguimiento, las acciones prioritarias para impulsar la gestión de recursos
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* la CNA ya cuenta con Plan de Manejo

Ciudad de Mexicali

Establecimiento de un Programa de Verificación Vehicular

DEPENDENCIA(S) CON JURISDICCIÓN

• Dirección de Ecología Municipal

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NECESIDAD AMBIENTAL Y DE SALUD PUBLICA

El problema de contaminación de la ciudad, adquiere particular importancia debido a su tendencia a aumentar de manera acelerada, como lo revela los datos obtenidos en el Programa para Mejorar la Calidad del Aire Mexicali 2000 - 2005. Cabe mencionar que la mejor manera de evitar que este problema se agrave, en un futuro no muy lejano, es mediante la participación de todos, a través de concientización ciudadana para respetar nuestro entorno y medio ambiente, sin embargo esa es una acción a largo plazo y bajo las circunstancias actuales se vuelve necesario tomar acciones inmediatas encaminadas a controlar y corregir un problema que aun no se sale de nuestras manos.

La ciudad de Mexicali y su Valle, al igual que en otras zonas de la región de la frontera México - Estados Unidos, el esfuerzo por mejorar la calidad del ambiente tiene necesariamente connotaciones de tipo binacional. En lo que toca a la calidad del aire, la región de Mexicali en México y la del Valle Imperial en Estados Unidos se encuentran normando parte de una misma cuenca atmosférica, lo cual puesto en términos más simples significa que sin importar el lugar donde se genere la emisión de contaminantes a la atmósfera, dentro de esta unidad atmosférica, la contaminación se manifestara en todos los lugares de la misma, aunque difiriendo es su concentración debido a los fenómenos de dispersión; razón de mas para resolver este problema de manera conjunta,

TIPO DE PROYECTO

Calidad de Aire

PROYECTO PROPUESTO

El proyecto propuesto cuenta con el establecimiento de un Programa de Verificación Vehicular en la Ciudad de Mexicali. El Programa de Verificación Vehicular tiene como objetivos contribuir a minimizar la contaminación por deterioro de la calidad del aire y afectación a la salud humana y como meta primordial el establecimiento de un Centro de Verificación Vehicular, utilizándose como una herramienta confiable para combatir el problema de contaminación generado por fuentes vehiculares en mal estado. El mismo Programa para Mejorar la Calidad del Aire de Mexicali 2000 - 2005 contempla dentro de sus acciones la necesidad de la implementación de un programa de verificación vehicular para controlar dichas emisiones, y la implementación y desarrollo de este tipo de programas esta contemplado dentro de los artículos del Reglamento de Protección al Ambiente para el Municipio de Mexicali, Baja California.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

El proyecto tendrá que cumplir con las estrategias y acciones que se establecen como responsabilidad municipal en el Programa para Mejorar la Calidad del Aire de Mexicali, 2000-2005 en el área de vehículos, así como en lo establecido en el Reglamento de Protección al Ambiente para el Municipio de Mexicali, Baja California, referente a la prevención y control de la contaminación atmosférica.

UBICACIÓN DEL PROYECTO

El proyecto se llevara a cabo en el Municipio de Mexicali, Baja California.

PROMOTORES DEL PROYECTO

H. XVII Ayuntamiento de Mexicali, B.C.

ESTIMACIÓN DEL COSTO

Para el desarrollo del programa de verificación vehicular es necesario cubrir un mínimo de requisitos en cuanto a instalaciones, equipo y personal que se encargara de la operación del mismo, estimando una inversión inicial y calculando el gasto mensual. Como inversión inicial: Aun no esta determinado.



BENITO JUAREZ MONUMENT IN MEXICALI, BC. BAJA CALIFORNIA IS SECOND ONLY TO MEXICO CITY IN THE NUMBER OF AUTOMOBILES PER CAPITA.

Ciudad de Mexicali

Recuperación de las Lagunas Campestre, Xochimilco y México

DEPENDENCIA(S) CON JURISDICCIÓN

• Dirección de Ecología Municipal

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NECESIDAD AMBIENTAL Y DE SALUD PUBLICA

Uno de los más graves problemas que se vive localmente es el de la contaminación en el suelo, principalmente por basura y escombros que se tira en lugares públicos y privados, como derechos de vía, vialidades, baldíos, etc. Generamos por persona un kilo de basura por día, mas lo generado por la industria, el comercio y los servicios, y esto considerando que el actual relleno sanitario municipal esta prácticamente lleno. En este sentido, lo más importante no es únicamente tener más mecanismos de limpieza, sino fomentar la cultura y con ello generar menos basura.

Los cuerpos de agua no son la excepción al problema, por lo que los drenes, canales y lagunas que se ubican dentro de la mancha urbana, presentan altos niveles de contaminación, principalmente por descargas clandestinas y desechos agroquímicos provenientes de los campos de cultivo del valle. Así mismo se encuentran en estas condiciones las Lagunas Xochimilco, México y Campestre, que son los cuerpos de agua de mayor relevancia en la ciudad junto con el Lago del Bosque y Río Nuevo. Se encuentran localizadas en la zona sur de la ciudad (Desarrollo Urbano Xochimilco) y poseen un gran valor paisajístico y potencial recreativo, por lo que el desarrollo urbano que se da en su entorno debe limitarse a infraestructura que aumente estos valores y ayude a conservarlos.

TIPO DE PROYECTO

Manejo de Residuos Sólidos

PROYECTO PROPUESTO

Promoción de la recuperación y desarrollo sustentable de la zona de las Lagunas Xochimilco, México y Campestre, localizadas en la ciudad de Mexicali, B.C., buscando mejorar las condiciones ambientales de la zona.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Básicamente cumplir con los estudios e iniciar con los trabajos de limpieza y dragado del área.

UBICACIÓN DEL PROYECTO

El proyecto se llevara a cabo en el Municipio de Mexicali, Baja California.

PROMOTORES DEL PROYECTO

H. XVII Ayuntamiento de Mexicali, B.C.

ESTIMACIÓN DEL COSTO

Para el desarrollo del programa es necesario cubrir un mínimo de requisitos en cuanto a los estudios, la estimación y costo de maquinaria y mano de obra requerido para iniciar los trabajos. Como inversión inicial: Aun no esta determinado.

Ciudad de Mexicali

Manejo y Disposición de Llantas Usadas

DEPENDENCIA(S) CON JURISDICCIÓN

• Dirección de Ecología Municipal

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

Uno de los problemas en el manejo de residuos sólidos municipales que aquejan al municipio de Mexicali, es la generación y disposición inadecuada de las llantas usadas, mismas que generan problemas de contaminación ambiental, salud pública, aseo y mala imagen urbana.

En la ciudad proliferan los tiraderos de llantas en la ciudad y dentro de la jurisdicción de las diferentes delegaciones municipales, donde se disponen de manera clandestina en predios baldíos, banquetas, dilles, orillas de carreteras y caminos, drenes y canales.

El problema de las llantas radica básicamente en la falta de sitios de disposición para estas, específicamente por la procedencia de la mayoría de estas (importadas de Estados Unidos), sin embargo, al ser recogidas por el Ayuntamiento de la Vía Pública, este residuo se convierte en municipal. Actualmente existen algunos proyectos para reciclar las llantas, sin embargo, todavía no se concreta alguno que sea para la ciudadanía viable, y solo se realizan como acciones concretas periódicamente para el acopio de llantas específicamente en colonias donde le DOSPM ya ha estimado los mayores volúmenes, aunque este tipo de operativos no representan una solución al problema.

TIPO DE PROYECTO

Manejo de Residuos Sólidos

PROYECTO PROPUESTO

El Gobierno Municipal a través de la Dirección de Ecología busca solucionar de forma integral el problema de las llantas usadas, para ello procura implementar acciones que en coordinación con otras áreas municipales, órdenes de gobierno, instituciones y organismos permitan además de llevar a cabo operativos de acopio de llantas usadas en forma periódica para su recolección y acopio temporal en estaciones de bomberos, se cuente con el equipo adecuado y recursos necesarios para realizar su trituración y debida disposición en un predio en la ciudad o bien siendo destinadas al reciclado.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Estudio de factibilidad técnica y económica para el manejo y disposición adecuada de llantas usadas. Dicho estudio cumplirá con lo establecido en el Reglamento de Protección al Ambiente para el Municipio de Mexicali, Baja California, referente a la prevención y control de la contaminación del suelo.

UBICACIÓN DEL PROYECTO

El proyecto se llevara a cabo en el Municipio de Mexicali, Baja California.

PROMOTORES DEL PROYECTO

H. XVII Ayuntamiento de Mexicali, B.C.

ESTIMACIÓN DEL COSTO

El costo del estudio de factibilidad es aproximadamente \$1,500,000 pesos. Para realizar e implementar plan recomendado dentro del estudio se requiere contar con el equipo adecuado y recursos necesarios para realizar su trituración y un sitio para donde desarrollar la actividad, almacenaje y disposición temporal en la ciudad, estimando una inversión inicial y calculando el gasto mensual. La inversión inicial será determinada al finalizar el estudio de factibilidad.

Ciudad de Mexicali
Construcción de un Relleno Sanitario y Unidad de Transferencia

DEPENDENCIA(S) CON JURISDICCIÓN

- Dirección de Servicios Públicos Municipales

PARA INFORMACIÓN CONTACTE

Ing. Juan Carlos Robles Nava
Subdirector

Dirección de Servicios Públicos Municipales
Av. Nochistlan y Zacatecan
s/n Col Zacatecas
Mexicali, Baja California

Phone: 686-556-96-59
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NECESIDAD AMBIENTAL Y DE SALUD PUBLICA

Actualmente en la Ciudad de Mexicali se cuenta con un tiradero a cielo abierto, el cual no es debidamente operado; en otras localidades del Valle se cuenta con tiraderos a cielo abierto, en los cuales se depositan los residuos sólidos generados por la población; además de no existir un control estricto en el ingreso ni estar cercado, ni contar con vigilancia, por lo cual mucha gente tira sus residuos en el lugar que mejor le plazca ocasionando que estos se dispersen.

TIPO DE PROYECTO

Manejo de Residuos Sólidos

PROYECTO PROPUESTO

El proyecto cuenta con la clausura del tiradero actual y el diseño y la construcción de un Relleno Sanitario Tradicional de Tipo Húmedo que cumpla con la normatividad ambiental vigente: geomembrana, geotextil, captación y control de lixiviados, pozos de-venteo de biogas, bascula, caseta de control, oficinas, taller mecánico, y zona de amortiguamiento. El proyecto también cuenta con el diseño y reingeniería de la Unidad de Transferencia y la reestructuración de rutas y renovación de flotilla de camiones recolectores.

ESTUDIOS NECESARIOS PARA REALIZAR PROYECTO

Se requerirá proyecto ejecutivo del Relleno Sanitario, proyecto ejecutivo de la Unidad de Transferencia, estudios de impacto ambiental, manifiesto, geológicos, hidrológicos, topográficos, tenencia de la tierra (Se cuenta con un diagnostico de la situación actual).

UBICACIÓN DEL PROYECTO

El proyecto se llevara a cabo en el Municipio de Mexicali, Baja California.

PROMOTORES DEL PROYECTO

Dirección de Servicios Públicos Municipales

ESTIMACION DEL COSTO

Costo total de \$72,000,000 pesos incluye infraestructura y estudios.

Ciudad de Mexicali

Elaboración de Indicadores Ambientales

DEPENDENCIA(S) CON JURISDICCIÓN:

Dirección de Ecología Municipal

PARA INFORMACIÓN CONTACTE:

Rosa Imelda Rojas Caldelas
Facultad de Arquitectura

Universidad Autónoma de Baja California
Blvd. Benito Juárez y calle de la normal s/n Unidad Universitaria Mexicali, BC
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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

Para lograr un desarrollo urbano sustentable, uno de los aspectos importantes al nivel municipal y en particular de las ciudades es el aplicar los lineamientos de la AGENDA 2012 al nivel local, para lo cual es imprescindible el contar con información ambiental sobre los diferentes temas que comprende la sustentabilidad en cuanto a los INDICADORES, ya que actualmente no se producen estadísticas ambientales que permitan evaluar el desempeño de las políticas públicas.

TIPO DE PROYECTO

Planeación y Desarrollo Municipal

PROYECTO PROPUESTO

El proyecto consiste en generar un sistema de información geográfico que permita registrar la información de los diferentes indicadores de sustentabilidad que permitan evaluar el avance o retroceso en lo concerniente a los lineamientos establecidos en la AGENDA 21 Local en los municipios. Ésta información deberá estar disponible para consulta de los diferentes actores de la sociedad involucrados en la toma de acciones, conservación y desarrollo urbano de las ciudades.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

1. Elaboración del marco metodológico para el inventario, medición, evaluación (parámetros), identificación de indicadores particulares para los asuntos transfronterizos.
2. Aplicación de la metodología para el levantamiento de información al nivel municipal y/o ciudad.

UBICACIÓN DEL PROYECTO

El proyecto se realizaría en Mexicali, Baja California y tendría un impacto al nivel municipal.

PROMOTORES DEL PROYECTO

Universidad Autónoma de Baja California

ESTIMACION DEL COSTO

El costo es aproximadamente \$600,000 pesos.

Playas de Tijuana

Construcción de una Planta de Tratamiento de Aguas Residuales para Riego

DEPENDENCIA(S) CON JURISDICCIÓN

- Dirección de Obras y Servicios Públicos Municipales del Ayuntamiento de Tijuana, Baja California

PARA INFORMACIÓN CONTACTE

Arq. Víctor Raúl López Alcaraz
Jefe del Departamento de Forestación y Panteones

Dirección de Obras y Servicios Públicos Municipales de Tijuana
 Av. Independencia y Paseo Centenario no. 1350, Zona Río, Tijuana, Baja California

Phone: 664-973-71-48 or 49
 Fax: 664-973-71-63
 Correo-E: vrlopez@tijuana.gob.mx

NECESIDAD AMBIENTAL Y DE SALUD PUBLICA

La ciudad de Tijuana tiene déficit de áreas verdes, esto debido en gran medida a la dificultad de contar con agua para el riego de éstas, ya que la mayoría del agua se trae del Río Colorado, resultando muy costoso, siendo conveniente el utilizar el agua tratada para el riego de nuevas áreas verdes o de las ya existentes, correspondiendo estas áreas a camellones y gasas de vialidades, las cuales una vez forestadas contribuirían al mejoramiento de la calidad del aire e imagen de la ciudad.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El proyecto consiste en la construcción de una planta de tratamiento de agua residual para utilizar en agua para riego de áreas verdes, ubicadas en vialidades de la ciudad de Tijuana, específicamente en los camellones del Blvd. Rosas Magallón y las gasas de la intersección de la vialidad antes mencionada con la carretera a Playas de Tijuana, la planta de tratamiento se ubicaría en la parte alta del cañón del Matadero, y abastecería por gravedad a las zonas antes descritas, requiriéndose la planta, tubería de conducción principal, sistema de riego y jardinería.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

- Levantamiento topográfico de las áreas verdes y de la zona de ubicación de la de tratamiento y recorrido de tuberías
- Diseño e ingeniería de la planta de tratamiento y líneas de conducción a las zonas donde se utilizará el agua tratada
- Proyecto arquitectónico (paisajístico) del sistema de riego y jardinería

UBICACIÓN DEL PROYECTO

Al noroeste del municipio de Tijuana, en el Cañón del Matadero que desemboca a Estados Unidos.

PROMOTORES DEL PROYECTO

Dirección de Obras y Servicios Públicos municipales del Ayuntamiento de Tijuana, Baja California

ESTIMACION DEL COSTO

Concepto	Costo (pesos)
Estudio de planta de tratamiento y línea principal	\$120,000
Proyecto arquitectónico de jardinería y sistema de riego	\$180,000
Levantamiento topográfico	\$120,000
Obra	\$9,500,000
Total	\$9,920,000

Playas de Rosarito

Canalización del Arroyo Huahuatay

DEPENDENCIA(S) CON JURISDICCIÓN

- Dirección de Desarrollo Urbano del H. II Ayuntamiento de Playas de Rosarito, B. C.

PARA INFORMACIÓN CONTACTE

Arq. Diego Moreno Maldonado.
Director de Desarrollo Urbano

H. II Ayuntamiento de Playas de Rosarito, B.C.
Calle José Haros Aguilar No. 2000,
Fracc. Villa Turística
Playas de Rosarito, Baja California

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

El arroyo Huahuatay es uno de los dos principales cuerpos de agua superficiales que atraviesa la mancha urbana y desemboca en la zona centro de Playas de Rosarito, su trayectoria es de Este a Oeste, y su corriente es de tipo intermitente y sin potencial hidrológico para uso agrícola o doméstico, debido a las bajas precipitaciones registradas durante la mayor parte del año, sin embargo durante el invierno, los niveles de precipitación aumentan considerablemente ocasionando fuertes corrientes con acción erosiva, que representan situaciones de riesgo, por los daños que las avenidas causan a la población, debido a la ocupación de habitantes en el cauce y la zona federal, con viviendas construidas de todo tipo de materiales, que al ejecutar obras a su arbitrio, ocasionan estrangulamientos o cambios de dirección del arroyo. Por otro lado este arroyo representa un grave problema de contaminación, debido a que en él se descargan las aguas residuales que provienen tanto de los asentamientos sin servicio de alcantarillado sanitario como por las aguas residuales de la mancha urbana provenientes de la planta de tratamiento -lagunas de oxidación- de la Comisión Estatal de Servicios Públicos de Tijuana (CESPT), localizada aguas arriba y sobre el margen derecho del arroyo. Aunado a lo anterior el arroyo es utilizado como basurero, donde se arroja toda clase de desperdicios por los asentamientos vecinos, además de que algunos piperos, descargan directamente al cauce las aguas servidas de las fosas sépticas del resto de la población que no cuenta con el servicio de alcantarillado sanitario, provocando una seria contaminación y azolve tanto en el cauce como en la playa turística, donde desemboca dicho arroyo, generando riesgos muy serios de salud, debido a que en su desembocadura los niveles de contaminación rebasan la normatividad establecida, situación que hace indispensable la canalización del arroyo hasta su desembocadura al mar.

Actualmente existe un sistema de riego a lo largo de la guarnición oriente de la carretera escénica que cruza la parte central de ciudad, para reutilizar parte del agua residual tratada que proviene de la planta de tratamiento de la CESPT, sin embargo dicho sistema ha sufrido vandalismo durante el tiempo que no ha sido utilizado, por lo que se requiere inversión para su restauración y para modificar el proceso e tratamiento de las aguas residuales para cumplir con la NOM-003-ECOL-1997. Sin embargo esta inversión además de fomentar el reuso del agua residual en nuestro Municipio fomentaría la creación de áreas verdes.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El proyecto cuenta con la delimitación de la zona federal, encauzamiento del arroyo Huahuatay en una longitud aproximada de 4 Km., correspondiente a la zona federal localizada dentro de la mancha urbana y reestablecimiento del sistema de riesgo de la carretera escénica.

Actualmente el arroyo Huahuatay tiene un tramo canalizado de 0.5 Km. A base de concreto hidráulico protegiendo parte de la zona urbanizada de la ciudad, la mancha urbana se ha extendido en ambos márgenes del arroyo a lo largo de su cauce, por lo que es necesario continuar con obras de canalización aguas arriba y aguas abajo, para proteger los asentamientos humanos y urbanizar la zona de acuerdo a la planeación estratégica del Plan de desarrollo urbano del centro de población de la ciudad de Playas de Rosarito.

El sistema de riego consta de:

1. Cárcamo de bombeo de 20 m³ de capacidad con 4 equipos motor-bomba de 7.5 HP c/u. Este cárcamo se encuentra ubicado en los terrenos de la Planta de Tratamiento y la capacidad máxima de bombeo probada es de 12 ps;
2. Línea de conducción de presión de 6" de diámetro, tubería de acero con una longitud de 1300 m de la planta de tratamiento al tanque de almacenamiento;
3. Tanque de almacenamiento de 40 m³ de capacidad. Este tanque se encuentra ubicado en calle Tuxtla Gutiérrez No. 1893 Colonia Constitución;
4. Línea de gravedad de 6" diámetro, tubería de acero con una longitud de 1600 m del tanque de almacenamiento a la autopista;
5. Línea de riego de 6" en tubería de acero, línea PVC de 2" de diámetro, con ramales para aspersión, con una longitud de 4340 m del Km 29 + 800 al Km 4 + 140 del lado oriente de la autopista Rosarito; y
6. 360 aspersores.

Actualmente debido al abandono del sistema y al vandalismo de la zona sólo se cuenta con 90 aspersores, por lo que se requiere la adquisición de 270 aspersores y la ampliación del sistema en la guarnición poniente del sistema. Asimismo se requiere inversión para modificar el proceso de tratamiento en la planta.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Actualmente se cuenta con el Proyecto ejecutivo de Encauzamiento del arroyo Huahuatay, dentro de la zona urbana de Rosarito, el cual consta de seis tomos, mismo que fue elaborado por la Gerencia Regional de la Comisión Nacional del Agua en la Península de Baja California.

UBICACIÓN DEL PROYECTO

El arroyo Huahuatay se ubica a los 32° 21' Latitud Norte y 117° 00' Latitud Oeste, es uno de los dos principales cuerpos de agua superficiales que atraviesan la mancha urbana desembocando directamente al centro de la mancha urbana de Playas de Rosarito. El arroyo lo forman flujos intermitentes y cruza la ciudad de Rosarito en forma longitudinal de Este a Oeste, tiene una cuenca de captación de 48.2 Km² y una longitud de recorrido de 14.5 Km. Aunque su corriente es de tipo intermitente y de escaso potencial hidrológico para uso agrícola doméstico, debido a las bajas precipitaciones registradas durante la mayor parte del año, durante el invierno, los niveles de precipitación aumentan considerablemente ocasionando fuertes corrientes con acción erosiva.

PROMOTORES DEL PROYECTO

Dirección de Desarrollo Urbano del H. II Ayuntamiento de Playas de Rosarito, B. C.

ESTIMACION DEL COSTO

El costo no es ha determinado.

Ciudad de Tijuana

Rehabilitación de la Planta de Tratamiento de Aguas Residuales en Ecoparque

DEPENDENCIA(S) CON JURISDICCIÓN

- Comisión Estatal de Servicios Públicos de Tijuana

PARA INFORMACIÓN CONTACTE

Dr. O. Alberto Pombo
Director del Departamento de Estudios Urbanos y del Medio Ambiente

El Colegio de la Frontera Norte
Km 18.5 Carretera Escénica Tijuana
Ensenada, San Antonio del Mar
Tijuana, B.C. 2270

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

El Ecoparque es una planta descentralizada de tratamiento de aguas residuales con fines de reuso en Tijuana, México, la misma es visitada por miles de personas al año. Debido a un retraso técnico, la planta tiene problemas en cumplir con la normativa Mexicana para el reuso de aguas negras lo que significa un peligro potencial de producirse algún contacto accidental con el agua recuperada. Se pretende utilizar al Ecoparque para demostrar una tecnología de tratamiento de aguas negras de bajo costo y alta efectividad que pudiera ser utilizada en las colonias populares de la región.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El Ecoparque tiene serios problemas técnicos que resultan en un incumplimiento de la normatividad federal para el reuso en áreas verdes recreativas (NOM 003, SEMARNAT 1996). Se tiene un convenio con el Centro de Investigación y Desarrollo Tecnológico en Electroquímica (CIDETEQ) de Queretaro para proveer los estudios y la tecnología necesarias. Tras una detallada inspección de las instalaciones se llega a la conclusión que la mejor solución para el problema sería la instalación de un Reactor Anaeróbico de Segunda Generación como etapa previa al Filtro Rociador que opera actualmente.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Se propone llevar a cabo las siguientes actividades:

- Diagnostico actual de planta de tratamiento de aguas del Colegio de la Frontera Norte
- Estudio de reingeniería para proponer soluciones a los problemas que se detecten en el diagnostico.
- Preparación de la ingeniería básica donde se establezca lo que CIDETEQ propone los cambios que se generen en la reingeniería.
- Supervisión en la construcción de las instalaciones requeridas

UBICACIÓN DEL PROYECTO

El Ecoparque se encuentra situado al noroeste de la Ciudad de Tijuana, Baja California, en el área conocida como rampa de Otay (Buena Vista) y es adyacente a las colonias de Otay Universidad y Guadalupe Victoria. Según las últimas estimaciones del Instituto Nacional de Estadística, Geografía e Informática (INEGI), la población de la ciudad de Tijuana se sitúa cercana a 1,200,000 habitantes de los cuales un porcentaje superior al 15% carece de servicio de drenaje sanitario. El proyecto de Ecoparque está orientado fundamentalmente al reuso del agua y a la demostración de tecnologías de pequeña escala que pueda ser utilizada para la construcción de pequeñas plantas descentralizadas en colonias populares de la región. El Ecoparque es un centro importante de educación ambiental como lo demuestran los 10024 visitantes que recibió en sus instalaciones en el año pasado, aparte de más de 4000 personas que se atendieron fuera del parque en diferentes eventos. Los alcances de una tecnología de tratamiento de aguas negras, eficaz, de bajo costo de construcción y de mantenimiento adecuado a las necesidades particulares de las colonias populares, trasciende los límites geográficos del Ecoparque para impactar en colonias alejadas sin contacto físico con el mismo.

PROMOTORES DEL PROYECTO

El Colegio de la Frontera Norte

ESTIMACION DEL COSTO

El costo para el estudio de ingeniería es aproximadamente \$50,000 pesos. El costo total para la construcción del reactor anaeróbico es aproximadamente \$1,500,000 pesos.



Ciudad de Tijuana

Sistema de Utilización de Aguas Tratadas para Riego

DEPENDENCIA(S) CON JURISDICCIÓN:

- Dirección de Obras y Servicios Públicos Municipales del Ayuntamiento de Tijuana, Baja California

PARA INFORMACIÓN CONTACTE:

Arq. Víctor Raúl López Alcaraz
Jefe del Departamento de Forestación y Panteones

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NECESIDAD AMBIENTAL Y DE SALUD PUBLICA

La ciudad de Tijuana tiene déficit de áreas verdes, esto debido en gran medida a la dificultad de contar con agua para el riego de éstas, ya que la mayoría del agua se trae del Río Colorado, resultando muy costoso, siendo conveniente el utilizar el agua tratada para el riego de nuevas áreas verdes o de las ya existentes, correspondiendo estas áreas a camellones y gazas de vialidades, las cuales una vez forestadas contribuirían al mejoramiento de la calidad del aire e imagen de la ciudad.

TIPO DE PROYECTO

Tratamiento de Aguas Residuales

PROYECTO PROPUESTO

El proyecto consiste en utilizar el agua que se bombea del Canal del Río Tijuana a la planta PB CILA para destinarla al drenaje sanitario, para el riego de áreas verdes en las vías rápidas Oriente y Poniente. Esta agua es originada por filtraciones de la Presa Rodríguez y algunos afloramientos del canal. Se pretende aprovechar las instalaciones de la PB CILA para desarrollar el sistema de tratamiento necesario y de ahí realizar el bombeo al sistema de riego. La obra consiste de re-bombeo, tuneleo, colocación de tubería y zampeado de piedra similar al existente.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

- Estudio y proyecto para el sistema de riego
- Diseño de las Plantas de tratamiento con capacidad de 20 lps
- Proyecto Arquitectónico
- Áreas jardinadas

UBICACIÓN DEL PROYECTO

El proyecto se compone de tres etapas consistentes en las áreas verdes ubicadas a lo largo de la canalización del Río Tijuana, desde el Puente México hasta el Puente Simón Bolívar, al final de la canalización. La primera etapa, abarca el riego desde el Puente México hasta el Puente del Ferrocarril (Puente Negro), la segunda etapa desde este puente del ferrocarril hasta el Puente Lázaro Cárdenas, y la tercera desde el Lázaro Cárdenas hasta el Puente Simón Bolívar.

PROMOTORES DEL PROYECTO

Dirección de Obras y Servicios Públicos municipales del Ayuntamiento de Tijuana, Baja California

ESTIMACION DEL COSTO

Concepto	Costo (pesos)
Primera etapa A	\$700,000
Primera etapa B	\$744,000
Segunda etapa	\$9,079,900
Tercera etapa	\$8,016,100
	\$16,540,000

Ciudad de Tijuana y Playas de Rosarito

Ampliación del Sistema de Agua Potable

DEPENDENCIA(S) CON JURISDICCIÓN:

- Comisión Estatal de Servicios Públicos de Tijuana

PARA INFORMACIÓN CONTACTE:

Miguel Ávila Niebla
Director

Comisión Estatal de Servicios Públicos de Tijuana
Blvd. Federico Benítez 4097,
Colonia 20 de Noviembre
Tijuana, BC

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NECESIDAD AMBIENTAL Y DE SALUD PÚBLICA

Actualmente, cerca de 119,000 personas (8% de la población) carecen de acceso al sistema de distribución de agua potable. Con el crecimiento desenfrenado, este déficit aumentará, lo cual provocará problemas en las condiciones sanitarias de las personas disminuyendo su calidad de vida.

En las zonas que carecen del servicio de agua potable existe una mayor posibilidad del deterioro ambiental debido a la falta de agua de la zona. El servicio inadecuado de la distribución de agua provocaría la sobreexplotación de acuíferos y fuentes superficiales (ríos, presas, etc.) afectando los ecosistemas de la zona.

TIPO DE PROYECTO

Abastecimiento de Agua

PROYECTO PROPUESTO

Se propone la ampliación del sistema de distribución de agua potable en Tijuana y Playas de Rosarito. Se instalarán 612,610 metros de tubería de 10 a 45 cm de diámetro, para brindar un servicio de cobertura del 100% al crecimiento poblacional del corto plazo.

ESTUDIOS NECESARIOS PARA REALIZAR EL PROYECTO

Estudios requeridos:

- Anteproyecto
- Proyecto Ejecutivo
- Manifestación del impacto ambiental
- Factibilidad técnica
- Factibilidad socio-económico

UBICACIÓN DEL PROYECTO

Municipios de Tijuana y Playas de Rosarito

PROMOTORES DEL PROYECTO

Comisión Estatal de Servicios Públicos de Tijuana

ESTIMACION DEL COSTO

Se estima un costo de \$360,950,000 pesos. .

The Salton Sea is the largest lake in California covering a water surface area of 376 square miles.

The salinity level of the Salton Sea (44 parts per thousand (ppt)) is greater than the salinity level of the Pacific Ocean (35 ppt).

The New River was formed in the early 1900s when the Colorado River flooded.

The California-Baja California border runs 1,37 miles eastward from the Pacific Ocean to the Colorado River.

Close to 50% of the US-Mexico border population (about 5.4 million people) live in the California-Baja California border region.

The New River is one of most impaired water bodies in the United States.

Tijuana's population doubles approximately every 10 years.

In the year 2000, Baja California residents contributed US\$9 billion to the regional economy in San Diego.

Baja California has the highest number of maquiladora industries in the US-Mexico Border.

The maquiladora industry constitutes about 92% of Baja California's gross regional product and employs the largest number of people in the State.

More than 10 million television sets a year are assembled in Tijuana - the biggest concentration of television assembly in the world.

If the coastline of the Baja California peninsula could be straightened, it would expand to the equivalent distance between Tijuana and Juneau, Alaska.

In 1950, the territory of northern Baja California was declared Mexico's 29th State.

The Baja California border economy tends to move with the US economic tide.

A self-adopted name for Baja Californians is "cachanilla", the name of a hardy desert plant.

The Paipai are the largest surviving native tribe in Baja California.

In 2003, over one million trucks crossed the Baja California-California border region.

The Baja California power grid is isolated from the Mexican national system but is connected to the California system via two cross-border power transmission lines.

Demand for power in Baja California is expected to grow by 7% per year, resulting in a doubling of demand by the Year 2010.

Baja California is home to some of the largest geothermal reserves in Mexico.