

CHAPTER SEVEN: IMPLEMENTING AND FUNDING THE SJBE MANAGEMENT PLAN



Torrecilla Lagoon.

THE SAN JUAN BAY ESTUARY

(SJBE) Program is unique among the existing 28 national estuary programs (NEPs) in the United States. It is the only NEP located in a densely populated, intensely industrialized, highly developed, and ecologically sensitive tropical island. Also, since San Juan, Puerto Rico is the oldest city within the United States, its historical and archeological features have immense social and cultural value. These diverse characteristics present a true challenge and an exciting opportunity of paramount importance for estuarine conservation and management in the western hemisphere.

The experience of the SJBE Program in managing valuable and threatened natural resources will be extremely useful to Latin American countries and other Caribbean island nations. Additionally, Puerto Rico, with its extensive bilingual and multi-cultural history, has the opportunity to improve communications with Spanish speaking countries and enhance information exchange across the western hemisphere.



The implementation of the Management Plan will have a tremendous impact on Puerto Rico. San Juan has an extensive water body system interconnecting San Juan Bay and several coastal lagoons through channels to the Atlantic Ocean. This system is anchored on the western portion by San Juan Bay, the major port of entry to Puerto Rico, and the busiest commercial port in the Caribbean. The eastern portion of the system has several lagoons and canals providing a continuous inland waterway from the Piñones State Forest to the Old San Juan tourist area. Some areas of the estuary are bordered by poor marginal communities which require high priority attention due to the public health effects of pollution.

In developing a strategy for implementing and funding the SJBE Management Plan, the Management Conference tried to meet the following objectives:

- Present the structure of the implementing organization for the Program, identifying those entities that will provide funding, manage funds, and represent the SJBE Program in the community;
- Identify funding sources;
- Classify funding sources as governmental (federal, state, municipal, and local governments) and private (corporations, foundations, and individual donors);
- Match funding sources with cost estimates for proposed action plans;
- Prepare a work plan or road map to obtain funding; and
- Spearhead the funding search effort for the SJBE Program.

Evaluating the progress of CCMP implementation is key to measuring success. The SJBE Program is responsible for tracking progress and following up on commitments, so that actions are implemented as proposed. A tracking system will be developed and used in meetings with implementing partners to make sure actions are conducted. Examples of such meetings include Implementation Committee meetings, PRIFA bi-weekly meetings, and briefings to the Governor. A biennial report will be developed by the Program to report on progress and assess, with the direction of the San Juan Bay Estuary Partnership, whether re-direction of efforts is needed. All of these activities are included as Programmatic Monitoring in the SJBE Program's Monitoring Plan (CCMP Volume II), available from the SJBE Program office. Biennial reports will be developed and presented to the Partnership, USEPA, and the public in public forums and workshops.

IMPLEMENTATION ORGANIZATION

The success of the San Juan Bay Estuary Program is dependent on the establishment of an effective organization to implement the Comprehensive Conservation and Management Plan (CCMP).

In order to understand how the existing institutional arrangements are working in the SJBE, the Program conducted a *Base Program Analysis* (Seguinot-Barbosa and Vázquez, 1999). This is also a requirement under Section 320 of the Clean Water Act.

The methodology used in the Base Program Analysis for the SJBE Program included:

- 1) gathering information on the priority issues affecting the estuary;
- 2) developing an inventory of agencies and organizations with authority over and expertise in resource management that are currently addressing those issues; and
- 3) analyzing the framework in terms of its ability to manage the resources and address priority issues along with recommendations on how to improve it.

The analysis, which was performed through questionnaires distributed to organizations in the Management Conference and supplemented by personal and telephone interviews, found that "in general, the current management structure is capable of coordinating the planning required to address stated general programmatic needs." However, the study also found that coordinated planning needs improvement. The SJBE Program worked on this through its Management Plan development process. During Management Plan implementation it will be important to assess, through yearly progress reports, if such coordination has improved and whether the institutional framework is effectively managing the estuary's resources and addressing its priority issues. Table 5 summarizes the findings and recommendations of the Base Program Analysis and lists those actions planned or taken to address those findings. (See CCMP Volume IV for the complete Base Program Analysis.)

The Base Program Analysis also provided information which helped identify a structure for Management Plan implementation. To better define the role of the SJBE Program in the implementation of the Management Plan and choose an appropriate implementation structure, the Management Conference reviewed and discussed possible state, regional, and local implementation structures. These discussions centered on the proposed action plans, available resources, existing and potential funding, and political acceptability. Ten criteria were used to select an implementation structure to execute the action plans:

- 1) Effectiveness of possible institutional arrangements;
- 2) Utilization of existing or available resources;
- 3) No duplication of efforts;
- 4) Minimization of overhead;
- 5) Needed funding for CCMP implementation;
- 6) Geographic scope of CCMP functions;
- 7) No regulatory authority;
- 8) No formal permit review role;
- 9) Widespread involvement and oversight of stakeholders; and
- 10) Political acceptability and stability.

230 Management Plan

 Table 5. Base Program Analysis findings and recommendations.

Findings and Recommendations	Actions Planned or Taken
A more detailed analysis is needed to identify the specific management actions required from institutions in charge of managing the estuary's resources in order to effectively carry out their duties at different levels.	The CCMP includes specific actions that will enhance enforcement and coordination activities in the SJBE, such as WS-3 and WS-4, which recommend the elimination of illegal sewage discharges into the estuary; WS-11, AD-6, and AD-7, which address the effective enforcement of the Used Motor Oil Management Law (Law No. 172), the Anti-Littering Law (Law No. 11 of 1995), and the Law for the Management of Used Tires (Law. No. 171); WS-14, which seeks regulatory and permit compliance for docks and other watercraft facilities; HW-14, which addresses the protection of endangered bird species; and PI-8, which promotes better understanding of estuarine resources among regulatory enforcement agencies and personnel.
The CCMP is a complex, long-term interdisciplinary effort that requires an extensive but integrated approach to plan and coordinate the participation of the many institutions involved in its implementation.	The SJBE Program Management Conference has proposed a public-private partnership as the new management structure that will define the role of the Program during the implementation phase of the CCMP. The new partnership is based on the proposed action plans, available resources, existing and potential funding, and political acceptability. Its membership, composed of an equal number of representatives from the public and private sector, fosters the interdisciplinary planning and coordination needed to implement the CCMP. As part of this new management structure, the SJBE Program Office will continue its role as the primary coordinating entity for the different components of the Program.
The organizations in the SJBE Program framework understand their roles but do not fully identify with the Program. It is recommended that all participating institutions review their roles and planned contribution to the effort to correct the SJBE problem areas.	Several efforts were initiated after the release of the Base Program Analysis that have increased the participation with and commitment to the SJBE Program. Among these, the Governor's Office has been particularly active in coordinating agency involvement during the development and detailed review of the CCMP and assuring that organizations are aware of their role in its implementation. The CCMP also clearly lists lead agencies for the implementation of specific actions, and this information has been reviewed by all of the involved partners. The SJBE Program Management Committee has included other key agencies within its membership such as the Housing Department. In addition, the Governor has directed PRIFA to discuss in their regular planning meetings those actions recommended in the CCMP that proposed infrastructure improvements, such as those dealing with the elimination of sewage discharges and the dredging of the Martín Peña Channel. The Management Conference has also recommended that an Intergovernmental Agreement be signed among all the agencies to further strengthen their commitments.



 Table 5. Base Program Analysis findings and recommendations.

Findings and Recommendations	Actions Planned or Taken
There is a need for mechanisms and procedures for sharing the management information in order for all participating institutions to better appreciate the relationship of their efforts to the SJBE Program management effort.	Besides enhancing the coordination between public and private institutions through their participation in the proposed SJBE Partnership, the SJBE Program has developed a homepage available on the Internet to improve the dissemination of data and management information. In addition to providing general information about the estuary and the Program, the homepage includes a literature search engine for searching and browsing the annotated bibliographies of studies and reports dealing with different subjects of the SJBE. Information provided in the annotated bibliographies includes author(s), year of publication, title, name of the organization for whom the work was performed, objectives of the report, time period covered, segment of the estuary where the study was performed, location where a copy of the report can be obtained, and a summary of the findings of the study. This tool will greatly improve the efficiency and effectiveness of the SJBE Partnership in managing the estuary by taking advantage of past characterization efforts while reducing the possibility of duplicating efforts. The Biennial Report, which will be presented to the public, will also be a tool for sharing management information.
It is anticipated that, as the SJBE Program framework gains experience and increases its ability to coordinate efforts, additional requirements will be identified, resulting in additional tasks and requiring in turn that the framework increase its effectiveness and/or add resources.	A Monitoring Plan has been developed to measure the effectiveness of the management actions included in the CCMP and to provide essential information to redirect and refocus management efforts as the Plan gets implemented. The data and information acquired from the Monitoring Plan will be an essential tool for improving the effectiveness of the SJBE Partnership in managing the system as new or different challenges arise. In addition, a biennial review of the SJBE Partnership will be conducted by USEPA to ensure that there is adequate progress in CCMP implementation. This review will be an additional tool for the SJBE Partnership to identify strengths and successes, including environmental results, and identify areas for improvement, providing necessary direction to refine management actions.
It is recommended that an on-line database of the SJBE Program management framework and task inventory be developed and that access to the same be provided to all organizations in the framework.	The Monitoring Plan, in addition to measuring the environmental response of the proposed management actions, will assess the accountability of implementing partners. This programmatic monitoring will help to keep organizations in the management framework informed of the status of the various programs and the degree to which the goals of the SJBE Partnership are being carried out. As part of this effort, an on-line tracking system will be put in place to document the implementation and progress of CCMP actions through the completion of milestones for each action plan.
It is recommended that the contributing factors to the Ecosystem Management problem be identified and defined.	The CCMP has included over 18 actions that focus directly and/or indirectly on ecosystem management, from protecting and improving habitats to enhancing wildlife populations. In addition, a Comprehensive Habitat Strategy has been proposed as one of several implementation actions needed to help gather the necessary information required for the development of the Monitoring Plan.



This structure, as approved by the Management Conference, is shown in Figure 11. It is composed of an equal number of representatives from both government agencies and the community. Thus, the new organization will change the existing management framework by creating a **public-private partnership**, known as the **San Juan Bay Estuary Partnership**.

The Partnership will be governed by a ten-member (10) Board of Directors consisting of five (5) federal and state government officials as ex-officio members and five (5) community representatives. The five ex-officio members will include: the Regional Administrator of the U.S. Environmental Protection Agency (USEPA) for Region 2 (non-voting member), the Secretary of the Puerto Rico Department of Natural and Environmental Resources (DNER), the Chair of the Puerto Rico Environmental Quality Board (EQB), the Chair of the Puerto Rico Planning Board (PRPB), and the Chair of the Puerto Rico Infrastructure Financing Authority (PRIFA). The five community representatives will be drawn from each of the following sectors: banking/finance, academia/technical, a non-governmental organization, and community residents. The five ex-officio members, the representative for the non-governmental organization, and the Chair (non-ex-officio) will be appointed by the Governor. The Academia/Technical Board Member will be the person selected by the Scientific and Technical Advisory Committee to chair that Committee. Similarly, the Community Residents Board Member will be the person selected by the San Juan Estuary Trust Fund to serve as Chair of the Trust Fund. (These two committees and the Trust Fund

are discussed further below.) All members of the Board will be appointed for three-year terms and can be reappointed for two additional consecutive terms. All Board members must have recognized capability as a result of their training and experience and no conflict of interest which could interfere with the performance of their duties. If a vacancy occurs, the Partnership will designate a new member to complete the term.

The Board of Directors will hold a regular meeting every two (2) months to discuss the business of the organization and can call for extra meetings or make decisions on urgent issues by referendum, if a Board meeting is not feasible. A quorum of five (5) members will be necessary to hold a Board meeting. Any referendum will have to be approved by a majority of the

Functions of the Implementation Organization

- Policy planning
- Budget security
- Governance
- Administration of organization
- Decision-making role
- Plan implementation
- Coordination of interagency agreements
- Authority for commenting on consistency determinations
- Program monitoring and accountability reviews
- Broad communication and publication roles

members of the Board. The Board will try to make decisions by consensus. If consensus can not be reached, decisions will be made by majority vote, either at a Board meeting or through a referendum. The Board will select a Vice-Chair, a Secretary, and a Treasurer from its members to serve for three-year terms. The Chair will preside over the meetings of the Board, sign official documents, and vote only in the case of a tie. If the Chair is absent, the Vice-Chair will serve with all the authority and privileges of the Chair. The Secretary will be responsible for producing the agendas, minutes, resolutions, referendums, and any other Board documents, and for securing the records of the Board. The

Figure 11. Implementation organization for the SJBE Program.

San Juan Bay Estuary Partnership

San Juan Bay Estuary Program Office

Director appointed by San Juan Bay Estuary Partnership for 1-year term

Principal Responsibilities:

- Conduct studies to understand, conserve, and manage SIBE resources
- Enhance public awareness of the SJBE
- Make recommendations to the Partnership on CCMP amendments
- Monitor success of action plan implementation
- Submit biennial progress reports to the Board
- Draft annual workplans and budget for the Board's approval
- Ensure communication/coordination among Committees (e.g., organize Implementation Committee meetings)

Scientific & Technical Advisory Committee

Members appointed by Partnership for 3-year terms; Chair chosen by Committee also serves as Academia/Industry Board Member

Citizens Advisory Committee

Members appointed by Partnership for 3-year terms; Chair chosen by Committee also serves as Community Residents Board Member

10 member Board appointed for 3-year terms; Chair (non-ex-officio) appointed by Governor*

5 Ex-Officio Agency Heads appointed by the Governor: USEPA (Region 2), EQB, DNER, PRIFA, and PRPB

4 Community Representatives representing: Banking/Finance, Academia/ Technical, Community Residents, and Non-Governmental Organizations, plus I Community Representative (non-ex-officio) appointed by the Governor to serve as Chair

Principal Responsibilities:

- Review the progress of the SJBE Program, give instruction to the Program Office, make recommendations to the Implementation Committee, and report on progress to the Governor and USEPA Administrator
- Review, revise, and approve the operating plan and budget of the SJBE Program
- Manage the SIBE Program in order to implement action plans and resolve issues
- Make recommendations to the Governor on public sector funding for the SJBE Program

San Juan Bay Estuary Trust Fund

3 Member Trust appointed by Partnership for 3-year terms; Chair chosen by Trust also serves as Banking/Finance Board Member; Trustees represent: Banking/Finance, Industry/Commerce, and Academia/Non-Governmental Organizations

Principal Responsibilities:

- Secure supplemental funding for the SJBE Program
- Manage the Trust Fund and invest funds prudently
- Disburse funds for authorized SJBE activities
- Appoint Fund-Raising and Investment Committee officers

Government Implementation Committee

Members representing government agencies and municipalities with implementation responsibilities; chaired by DNER representative

Principal Responsibilities:

- Coordinate implementation activities
- Comply with commitments from all parties to implement their action plans
- Advise Program Office on the development of SJBE work plans and budgets
- Report to the Board on progress of CCMP implementation
- Assist the Board in developing tracking reports to monitor the implementation of action plans

Fund-Raising Committee

Investment Committee

*Chair does not vote, except in case of a tie.



Secretary can preside over Board meetings when both the Chair and Vice-Chair are absent. The Treasurer will be in charge of the finances of the Partnership.

The Board of Directors will develop its own bylaws to govern the actions, meetings, finances, and any other business of the Partnership. The Board will appoint an Executive Director for a term of two (2) years to plan, coordinate, direct, supervise, and manage the work to be performed by the San Juan Bay Estuary Program. The Executive Director can be reappointed by the Board for additional terms as necessary.



Northern shore of the Condado Lagoon.

The San Juan Bay Estuary Partnership will establish the San Juan Estuary Trust Fund,

composed of three (3) trustees, to manage the private funds granted to the Partnership and any contributions assigned by the Legislature. The Trust Fund shall be a nonprofit organization, legally registered to do business in Puerto Rico, that will seek support, solicit, and manage funds for the Partnership to complement the assigned public funds for the implementation of specific actions. Since most of the actions in the CCMP are government financed projects, the Trust Fund is not intended to be the main focus for financing the implementation of the action plans. The Trust Fund will not manage the Clean Water Act Section 320 funds for the implementation of the CCMP or the financing of the SJBE Program. The Board may directly manage the Section 320 funds or use another non-governmental organization to assist in the management of these funds. The Trustees must possess recognized capabilities as a result of their training and experience and have no conflicts of interest which would interfere with the performance of their duties in the Trust Fund. A Trustee will be appointed by the Partnership from each of the following groups: banking/finance, industry/ commerce, and academia/NGOs. Trustees will serve for three-year terms. The Chair of the Trust Fund will be selected by a majority of the Trustees and will also serve as the Banking/Finance representative on the Board of Directors. The Trustees will establish a Fund-Raising Committee and an Investment Committee to assist the Trustees in their duties. The Trustees will appoint the officers of these or any other committees established by the Trust Fund.

There will be three (3) standing committees to advise, assist, and coordinate the execution of the action plans: an Implementation Committee, a Scientific and Technical Advisory Committee

(STAC), and a Citizens Advisory Committee (CAC). The existing members of the STAC and CAC will be reappointed, but new members will be welcomed as part of the implementation process. The Implementation Committee will serve under and report to the Board of Directors to coordinate the implementation of the budgeted actions. The STAC will review, revise, and advise the Partnership on scientific studies

In some cases, actions in the Management Plan are already underway. These projects will totally redesign some localities, resulting in a tremendous impact on the city of San Juan. The potential for urban redesign, commercial activity, tourism, sport fishing, recreation, and social rebirth will be of dramatic importance to future development of the city.

and technical matters related to implementing the actions. The CAC will advise the Partnership on the opinions and desires of the community regarding the implementation of the actions and will assist in implementation efforts.

The Implementation Committee will consist of a representative from each of the following organizations: USEPA, U.S. Coast Guard (USCG), U.S. Army Corps of Engineers (USACE), U.S. Geological Survey (USGS), U.S. Fish and Wildlife Service (USFWS), U.S. Natural Resources Conservation Service (NRCS), DNER, Puerto Rico Department of Economic Development and Commerce (DEDC), EQB, PRPB, Puerto Rico Ports Authority (PRPA), Puerto Rico Aqueduct & Sewer Authority (PRASA), PRIFA, and the municipalities of San Juan, Carolina, Bayamon, Toa Baja, Cataño, Guaynabo, Trujillo Alto, and Loíza. The representative from DNER will chair the Implementation Committee.

The STAC will consist of scientific and technical personnel appointed by the Board of Directors of the Partnership for three-year (3) terms. Members can be reappointed for additional consecutive terms. The members of the STAC will be selected from academia, government, industry, consulting firms, or any professional group within the community. Representatives from the USGS and the National Marine Fisheries Service (NMFS) will serve on the STAC. The STAC will select a Chair by majority vote. The Chair will serve on the Board of Directors as the Academia/Technical representative. The STAC will serve under and report directly to the Board of Directors.

The CAC will consist of private citizens representing community residents, civic groups, community environmental groups, or any other citizens' group existing in the municipalities of San Juan, Cataño, Toa Baja, Bayamon, Guaynabo, Trujillo Alto, Carolina, and Loíza. Members will consist of bona fide residents of the communities around the estuary who have an interest in resource management. The Partnership will appoint CAC members for three-year (3) terms. These appointments can be extended for additional terms. The CAC will select a Chair from its members who would also serve on the Board of Directors as the Community Residents representative. The CAC will serve under and report directly to the Board of Directors.



Condado Lagoon beach.

The Estuary Program Office will consist of a small staff that will assist the Board in implementing the Management Plan. The Program Office will be responsible for informing the Partnership, through the Implementation Committee, on the progress in implementing CCMP commitments. The Program Office will also be responsible for reporting on the results of the programmatic and environmental monitoring. In addition, the Program Office will submit biennial reports to the Board and USEPA with recommendations on reducing efforts and making improvements in the efficiency of operations. The Program Office will also provide assistance to



federal, state, and local stakeholders in the implementation of the CCMP. The Program Office will be supervised by an Executive Director, who will implement decisions adopted by the Board, manage the office, coordinate tasks of the Ad hoc Committees, and conduct public awareness and participation functions. The Program Office will be housed within a non-governmental organization.

At the discretion of the Board, a majority of the members of the Board voting in a meeting could establish necessary Ad hoc Committees. These committees would each have a Chair to direct the business of the committee, and a Secretary to keep agendas, minutes, and records for the committee. Each committee would advise the Board of Directors on matters related to the implementation of the Management Plan, the overall management of the estuary, the administration of the program, public awareness, or any other issue as deemed appropriate by the Board. As needed, the Board could establish several Ad hoc Committees or Ad hoc Site-Specific Committees for special localities of the estuary such as Martín Peña, Piñones, Cucharillas, and San Juan Bay.

FUNDING THE MANAGEMENT PLAN

The National Estuary Program provided funding for the development of the Management Plan, which was matched with funds from the government of Puerto Rico. However, the National Estuary Program does not provide full funding for the implementation stage of the Management Plan. Federal funding has been reduced to \$300,000 on an annual basis for plan implementation.

Budgetary constraints of the federal government have resulted in the delegation of programmatic and budgetary responsibilities to state and local governments. Nevertheless, there are three historical issues related to the integration of environmental issues in a sustainable development model which affect state and local government abilities to fund current and future environmental needs. The first of these issues is public complacency. While people are typically willing to pay for Internet communication, cable television, cellular telephones, and other amenities, they are typically not willing to pay more for water, sewers, electricity, and solid waste collection and disposal services. The second issue is the lack of a vision for sustainable development, including how individual actions affect a sustainable future. There is a general tendency from the citizenry to rely on municipal, state, and federal governments to take full responsibility for environmental problems and to fully fund the solutions to these problems. The third issue is an increasing public demand for environmental protection. With the growing recognition that human prosperity is directly related to a safe and healthy environment, environmental programs are facing new public demands while funds are decreasing. Implementing the Management Plan will be a challenge: there are increasing needs, decreasing funds, and greater demands for environmental improvements from the residents and businesses around the estuary. The present dilemma is to find creative ways to use available resources to carry out the actions in the Management Plan.

Despite limited federal funding, the SJBE Program presents an opportunity to develop the San Juan Bay Estuary into a showcase model for other Caribbean and Latin American nations. The SJBE Program is the only organization on the Island with an integral and broad perspective of the San Juan Bay Estuary. Other environmental organizations are primarily involved in projects with limited geographic or environmental scope. Therefore, with adequate funding, the SJBE Program should be able to institute a significant change in the overall management of the estuary. The SJBE Program

could also become a real-life laboratory for developing experience and gathering data on projects in a tropical environment. While some federal funds and grants are available, it is expected that the bulk of the larger and higher cost actions will rely on state funding. Fortunately, for most of the high cost actions in the Management Plan, such as the dredging of the Martín Peña Channel, the relocation of families, and the connection to sewer systems, there is a very strong willingness from the Commonwealth government to initiate these projects.

As described earlier in this chapter, the Management Conference has approved a public-private partnership to implement the SJBE Program. This partnership will be an effective vehicle for generating the necessary community and private involvement and support to leverage additional government funding.

While Puerto Rico enjoys one of the highest standards of living of the Caribbean and Latin America, the Island per capita income is still below the per capita income in the State of Mississippi, the poorest state in the Union. Therefore, in identifying funding sources, the Finance Committee has avoided heavy taxing schemes in view of the limited economic resources of the residents. Private foundations and corporations are identified as important sources of funding for key and "soft" projects recommended in the action plans.

FINANCING STRATEGY

The main thrust of the financing strategy is to work very closely with both state and federal governments on those high cost projects which have significant impact on the ecosystem, public health, and economic and social conditions of the estuary.

There are two sets of costs associated with the implementation of the Management Plan for the San Juan Bay Estuary. The first set of costs is associated with funding a small staff of employees in the Program Office. This cost is estimated at \$300,000 per year during the implementation stage with incremental yearly increases for cost of living. The second set of costs is related to implementing



Western Martín Peña Channel.

the proposed actions in the Management Plan. The total cost of implementing the proposed actions is estimated to be approximately \$254 million. Assuming a 25 percent increase for contingencies, this total could reach approximately \$317 million.

The Management Committee, with the assistance of a financial advisor, has developed a financing strategy that includes a step-by-step process for identifying funding sources, contacting funding sources, accessing funds, and generating additional funds from various available sources. Actions are being categorized for funding as: (1) major capital investment projects urgently needed due to their dramatic



impact on the environment or public health; (2) minor capital investment projects to improve the quality of life; and (3) educational projects to develop public awareness. These criteria also correspond with the priority ranking assigned to all Management Plan actions. Actions are also being classified according to funding sources: federal, state, municipal or local governments, private foundations, and private corporations and individual donors. Potential sources of funding for each of the proposed actions are provided in the tables at the end of this chapter.

The available funds will be used to implement the action plans as determined by the Board of Directors. The acquisition of money management services could be contracted by the Board of Directors to assist in the management and auditing of these funds.

The final financing strategy includes a complete cost analysis. The purpose of the cost analysis is to match actions with available financial resources by: (1) identifying the costs and funding requirements of each action, (2) prioritizing the proposed actions, (3) preparing an inventory of funding sources, (4) classifying the prioritized actions according to type of funding (federal, state, municipal or local governments, foundations, and private donors), (5) selecting and contracting with funding sources, and (6) designating an organization to access the funding sources, obtain commitments, and manage the funds obtained. The process of matching the cost estimates of the actions with the sources of funds is based solely on the Management Plan cost estimates. Based on these estimates, the financing strategy identifies projects according to priority, level of investment, and potential improvements to public health and the economy of the region.

During Management Plan implementation, the San Juan Bay Estuary Trust Fund will continue to refine the financing strategy by assessing existing revenue sources, identifying implementing parties, seeking potential new sources of funding, and determining the feasibility of new funding sources. The SJBE Program has also completed a capital improvement plan to assist in the implementation of the Management Plan (see Volume III of CCMP).

Sources of Funding

The potential sources of funds are divided into three main categories: (1) funds derived from the federal government, (2) funds obtained from the governments of Puerto Rico, and (3) funds from private enterprises. Please refer to Tables 6 through 9 at the end of this chapter. In addition, Tables 10 and 11 (taken from the *Capital Improvement Plan* - Volume III of the CCMP) provide more specific information on Commonwealth and Federal funding sources for each action. Table 12 provides information on those CCMP actions that are already included in each agency's Capital Improvement Plan.

Federal Government Funding Sources

Federal funds could become available through a wide variety of sources, including base funding grants from USEPA, supplemental funding from federal agencies, sources from the Federal Catalog of Domestic Assistance, state revolving funds, Coastal Wetland Planning and Restoration Act funds, Coastal Zone Management Act funds, the Cooperative Endangered Species Conservation Fund, the Forest Legacy Program, Urban and Community Forestry, the Farmland Protection Program, Urban

Parks and Recreation Recovery, the Protecting Our Oceans and Coasts Program, Coastal Dredge Area Restoration, Fisheries Habitat Restoration, National Estuarine Research Reserves System, mitigation projects, portions of federal fines, and the assignment of funds by Congress for specific infrastructure projects.

The Coastal Wetlands Planning and Restoration Act (CWPRA) provides funds for activities concerning wetlands. CWPRA typically provides funding for those construction projects which have a significant multiplier effect. However, federal funding under this Act must be matched up to 25 percent by state funds.

Other sources of federal funds are: Section 319 of the Clean Water Act, which provides financing to states for projects between \$50,000 and \$80,000; Community Grant Programs; and State Revolving Funds. In addition to the above, the USACE provides funds through direct Congressional authorizations, and Federal Highway grants are available to repair ecological damage caused by highway construction.

State and Municipal Government Funding Sources

The Management Committee and the SJBE Program staff have been in contact with the Secretary of Transportation and Public Works and the Chairman of Puerto Rico's Infrastructure Council in order to keep these agencies informed of the proposed actions for the estuary. Furthermore, these contacts are useful in keeping the SJBE Program abreast of the Secretary's plans to dredge and widen the Martín Peña Channel, the most polluted portion of the San Juan Bay Estuary and the top priority action in the Management Plan. The financing strategy includes continued coordination with the Secretary to ensure that top priority actions are included in the Puerto Rico Capital Improvement Program of the Department of Transportation and Public Works as an ongoing planning process.

Another potential source of state funds could be a SJBE license plate sales program. This project will be included for discussion in future meetings with the Secretary of Transportation and Public Works and the Puerto Rico Legislative Assembly. License plate sales would be an innovative fund raising technique for Puerto Rico. This effort would not only generate funds, but would also improve public awareness and education about the SJBE.

The Legislature of Puerto Rico could approve new laws to include the estuary program in the yearly donations of the government, to allow specific participation by the estuary program in the rum tax rebates from the federal government, and to establish an additional voluntary contribution on yearly car, boat, fishing, and hunting licenses or income tax returns. The rum tax rebates would be an excellent long-range mechanism to finance the estuary program, since these are federal taxes from rum sales which are transferred to the government of Puerto Rico without being earmarked for any specific purpose. The commonwealth and municipal governments could participate with inkind services or by carrying out or financing specific actions in the Management Plan. In addition, the State Legislature could lobby for direct appropriations for capital investment projects and public education. Pollution fines collected by Puerto Rico's environmental agencies are another potential source of state funding.

240 Management Plan



It is proposed that a trust fund (described earlier in this chapter) be established as a mechanism to receive monies from sources such as environmental fines, user fees, taxes, donations, and mitigation projects and to manage these monies to ensure their long-range availability and effective use.

Private Foundations in Puerto Rico, the U.S., and Abroad

Funding from private sources can be obtained through: (1) corporate donations, (2) foundation donations, (3) academic grants, and (4) in-kind services. The financing strategy includes the selection of a small group of key decision-makers from private businesses in Puerto Rico who can raise funds from foundations and corporate and individual donors on the Island. Such individuals must have an interest in ecology, the knowledge and ability to generate funds, and, to a great extent, a certain prestige in the community.

The Foundation Center in New York has been contacted for connections with various private foundations in the U.S. Focus will be placed on those foundations that are interested in the ecological and social impacts of development projects in Puerto Rico, the Caribbean, and other tropical areas of Latin America. Additionally, a detailed search will be conducted for domestic or foreign foundations that have a special interest in the Hispanic communities of the U.S. Another area of search will be foreign foundations with the authority to generate interest in ecological and natural resources projects.

Potential corporate donors will also be pursued. Focus will be placed on both locally-owned companies and multinational corporations operating in Puerto Rico. It is possible that certain corporate donors could be matched with community awareness and education projects.

The San Juan Bay Estuary Trust Fund will assign specific responsibilities to its members, who combined with the SJBE Program staff, will pursue additional funding commitments through presentations and personal calls.

The SJBE Program will continue to develop these ideas and welcomes comments from the public and involved government agencies.

July 2000

Table 6. Potential sources for financing Water and Sediment Quality Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
Ø WS-1	Design and Construct a Storm and Sanitary Sewer System for the Communities Fringing the Eastern Section of the Martín Peña Channel and other Areas Adjacent to the SJBE.	•	•				\$31,335,000 ¹	С
WS-2	Relocate families living adjacent to the Martín Peña Channel.	•	•	•			\$74,740,000 ²	С
W S-3	Eliminate unauthorized raw discharges (bypasses) from PRASA's collection system and pump stations into the SJBE.	•	•				\$11,160,000³	С
W S-4	Eliminate Illegal Commercial and Residential Sewage Discharges into the Stormwater Sewer System.	•	•				\$7,725,000 ⁴	С
₽ WS-5	Improve flow in the Martín Peña Channel.		•				\$112,600,000 ²	C
W S-6	Fill depressions at the Suarez Canal and the Los Corozos, San José, and Torrecilla Lagoons.				•		\$5,820,000²	С
WS-7	Improve the flow of water between La Esperanza Peninsula Cove and San Juan Bay.			•			\$1,300,000²	С
WS-8	flow.	•	•				\$17,000³	R
WS-9	Minimize sediment loadings into the San Juan Bay Estuary system.		•				\$200,000	R
WS-10	Develop toxics criteria for sediment in the SJBE.		•				\$250,000 ^{2, 3, 4, 5}	R
WS-11	Enforce the Used Motor Oil Management Law in the estuary's watershed (Law No. 172).		•				\$92,000	С
WS-12	Establish a policy to restore and protect riparian corridors along SJBE tributaries.		•				\$150,000 ^{3, 4, 5}	R

Table 6. Potential sources for financing Water and Sediment Quality Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
WS-13	Develop a plan for creating a Board of Pilot Commissioners to focus exclusively on harbor safety issues.		•				N/A	С
WS-14	Create a task force to monitor docks and other watercraft facilities within the SJBE system and ensure regulatory and permit compliance.		•				\$80,000	R
WS-15	Assess the establishment of non-commercial watercraft special use areas in the SJBE.		•				\$75,000 4	R
WS-16	Develop and issue NPDES permits to regulate stormwater discharges in urbanized areas of the San Juan Bay Estuary watershed that contribute stormwater point source discharges to the system and its tributaries.	•	•	•			N/A	С

Key:

Where a cost range is provided in the action plan, the most conservative (highest possible) cost has been used to calculate the totals shown in this table. Please refer to the action descriptions in the action plan section of this document for more information.

This action has been identified as high priority and urgent.

- ¹ Some of the costs associated with the implementation of this action are included in other actions.
- ² This total does not include funds previously expended to complete certain steps associated with this action.
- ³ This total does not incorporate costs for steps for which only a unit cost is available.
- ⁴ One or more of the steps associated with this action have recurring annual costs. This total includes only the cost associated with the first year of action implementation.
- ⁵ Costs for one or more elements of this action have not been determined due to insufficient data or because the cost will depend on the results of other actions or steps.
- C = Commitment (See Introduction to Action Plans for definition.)
- R = Recommendation (See Introduction to Action Plans for definition.)



Table 7. Potential sources for financing Habitat, Fish, and Wildlife Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
HW-1	Plant mangroves along the western shoreline of San Juan Bay.		•		•		\$133,780	R
HW-2	Restore seagrass beds in the Condado Lagoon.		•		•		\$1,612,000 ¹	R
HW-3	Plant mangroves along the shores of the Condado Lagoon.		•		•		\$43,500 ²	R
HW-4	Designate a section of the Martín Peña		•				\$187,000 ^{2, 3}	R
HW-5	Plant mangroves along the shores of the San José And Los Corozos Lagoons.				•		\$77,500	R
HW-6	Designate the Torrecilla Alta-Vacia Talega area as part of the Piñones State Forest Nature Reserve.		•				\$135,000 ^{2, 3}	R
HW-7	Restore seagrass beds within the SJBE.		•				\$105,000²	R
HW-8	Designate Las Cucharillas Marsh a Nature Reserve.	•	•		•		\$115,000 ^{2,3}	С
HW-9	Establish management measures within the SJBE system for the land crab <i>Cardisoma guanhumi</i> .		•				N/A ^{4, 5}	R
HW-10	Implement a sea turtle recovery plan.		•				\$142,000	R
HW-11	Assess the impacts of power plant entrainment on fishery resources.	•	•				\$42,500	R
HW-12	Assess the impact of thermal discharges on biological communities in San Juan Bay.	•	•				\$42,500	R
HW-13	Enhance and protect critical plant species within the SJBE.	•	•				\$315,000 ^{2,3}	R
HW-14	Protect existing populations of endangered and threatened bird species. and protect and restore their habitat within the SJBE system.	•	•				\$125,000 ^{2, 3}	R
HW-15	Estimate the population and habitat use of the West Indian manatee within the SJBE and establish manatee protection zones.		•		•		\$371,000	R

Table 7. Potential sources for financing Habitat, Fish, and Wildlife Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
HW-16	Substitute cayeput trees (<i>Melaleuca</i> quinquenervia) with native species and prohibit planting of the tree in the SJBE.		•	•	•		\$510,000 ^{2, 3}	R
HW-17	Determine historic and present recreational fishing areas in the SJBE and develop a plan to adequately manage recreational fishery resources.		•				\$45,000 ^{2,5}	С
HW-18	Support enactment of the new fisheries law by the legislature and the governor.		•				N/A ⁴	С

Key

Where a cost range is provided in the action plan, the most conservative (highest possible) cost has been used to calculate the totals shown in this table. Please refer to the action descriptions in the action plan section of this document for more information.

¹ Some of the costs associated with the implementation of this action are included in other actions.

⁴ This total does not include funds previously expended to complete certain steps associated with this action.

⁵ This total does not incorporate costs for steps for which only a unit cost is available.

C = Commitment (See Introduction to Action Plans for definition.)

R = Recommendation (See Introduction to Action Plans for definition.)



² Costs for one or more elements of this action have not been determined due to insufficient data or because the cost will depend on the results of other actions or steps.

³ One or more of the steps associated with this action have recurring annual costs. This total includes only the cost associated with the first year of action implementation.

Table 8. Potential sources for financing Aquatic Debris Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
AD-1	Develop and implement community-based solid waste management and recycling programs in coordination with municipalities.	•	•	•			\$400,000 ^{1, 2}	C
AD-2	Continue to implement the Action Plan Demonstration Project developed in Piñones, Loíza.				•		\$137,000 ¹	R
AD-3	Continue the annual aquatic debris clean-up event held in Islote de la Guachinanga.				•	•	\$50,000 ¹	R
AD-4	Conduct periodic aquatic debris clean-up activities at suggested SJBE locations.				•	•	\$330,000 ¹	R
AD-5	Establish Solid Waste Pollution Prevention Pilot Programs at different SJBE locations.	•	•		•		\$350,000	R
AD-6	Implement measures to detect, correct, and control illegal dumping activities and enforce Puerto Rico's anti-littering law (Law No. 11 of 1995).		•	•			\$145,000 ¹	С
AD-7	Enforce the Law for the Management of Used Tires (Law No. 171) and other regulatory measures related to the illegal dumping of used tires within the estuary system and its drainage basin.		•	•			\$15,000³	С

Key

Where a cost range is provided in the action plan, the most conservative (highest possible) cost has been used to calculate the totals shown in this table. Please refer to the action descriptions in the action plan section of this document for more information.

This action has been identified as high priority and urgent.

¹ One or more of the steps associated with this action have recurring annual costs. This total includes only the cost associated with the first year of action implementation.

² This total does not incorporate costs for steps for which only a unit cost is available.

³ Costs for one or more elements of this action have not been determined due to insufficient data or because the cost will depend on the results of other actions or steps.

C = Commitment (See Introduction to Action Plans for definition.)

R = Recommendation (See Introduction to Action Plans for definition.)

San Juan Bay Estuary Program

Table 9. Potential sources for financing Public Education and Involvement Actions.

Number	Action	Federal Government	State Government	Municipal Government	Private	Other	Total Cost	R/C
PI-1	Develop and promote low-impact recreational activities within selected areas of the SJBE.		•	•	•		\$625,000¹	R
PI-2	Post educational and interpretative signs at highly visible, heavy traffic areas throughout the SJBE watershed (bridges, roads, parks, marinas, ports, waterfronts, etc.) to educate the public on the system's components, functions, and values.		•	•	•		\$100,000²	R
PI-3	Establish a program to provide citizens with effective and organized volunteer opportunities to support the SJBE's restoration projects (water quality monitoring, education, etc.).	•			•	•	N/A	С
PI-4	Develop a long-term public education and outreach program.	•	•		•		\$350,000	С
PI-5	Develop an ecotourism program to promote sustainable, low-impact enjoyment of SJBE's natural resources as a means to further their conservation.		•	•	•		\$595,000 ^{1, 3, 4}	R
PI-6	Develop an Environmental Education Program to target young audiences at schools and other non-formal educational institutions throughout the SJBE watershed.	•	•		•		\$385,000 ⁴	R
PI-7	Develop a Memorandum of Understanding between public and private entities and the SJBE Program to expand the scope of the Program's public education and outreach activities.	•	•	•			N/A	С
PI-8	Promote better understanding of estuarine resources among regulatory enforcement agencies and personnel.		•	•			\$90,000	С

Key

- Where a cost range is provided in the action plan, the most conservative (highest possible) cost has been used to calculate the totals shown in this table. Please refer to the action descriptions in the action plan section of this document for more information.
- ¹ Costs for one or more elements of this action have not been determined due to insufficient data or because the cost will depend on the results of other actions or steps.
- ² This total does not incorporate costs for steps for which only a unit cost is available.
- ³ Some of the costs associated with the implementation of this action are included in other actions.
- ⁴ One or more of the steps associated with this action have recurring annual costs. This total includes only the cost associated with the first year of action implementation.
- C = Commitment (See Introduction to Action Plans for definition.)
- R = Recommendation (See Introduction to Action Plans for definition.)

Table 10. Possible funding sources for the financing of actions by state government agencies.

Governmental Agency/ Public Corporation	Legal Basis	Selected Programs That Could Finance Actions	Estimated Budget For 2000-2001 (Thousands \$)	Actions That Could Be Financed By The Identified Programs *
Authority for the Financing of Industrial, Touristic, Education, Health and Environmental Control Facilities (AFICA)	Law No. 121 of 1977	Assistance and Financing for Facilities Investment Program	\$45,642	WS-1, WS-2, WS-3, WS-5
Puerto Rico Infrastructure and Finance Authority (PRIFA)	Law No. 44 of 1988	Administrative and Financing Assistance to Public Corporations Program	\$449,900	WS-1, WS-2, WS-3, WS-5
		New "Hogar Seguro" Program	\$136,609	
Puerto Rico Aqueduct and Sewer Authority (PRASA)	Law No. 40 of 1945, Law No. 328 of 1998	Administration, Operation, and Maintenance of Aqueducts and Sewer Systems Program	\$331,008	WS-1, WS-3 , WS-4 , WS-5
		Congreso Calidad de Vida	\$57	
Puerto Rico Department of Education (DOE)	Article IV, Section 6 of the Constitution of the Commonwealth of Puerto Rico, the new Organic Law for the Public Education Department of Puerto Rico (Law No. 149), Law No. 230 of 1942, Law No. 51 of 1996	Community Schools Program	\$1,641,630	PI-6

Management Plan July 2000

Table 10. Possible funding sources for the financing of actions by state government agencies.

Governmental Agency/ Public Corporation	Legal Basis	Selected Programs That Could Finance Actions	Estimated Budget For 2000-2001 (Thousands \$)	Actions That Could Be Financed By The Identified Programs *
Puerto Rico Department of Housing (DOH)	Law No. 97 of June 1972, as amended, The Organic Law	Community Rehabilitation Administration	\$4,317	WS-2, WS-5
	of the Department of Housing	Housing Bank Finance Agency	\$191,163	
		Housing Development and Improvement Administration	\$12,769	
Puerto Rico Department of Natural and Environmental Resources (DNER)	Law No. 97 of June 1972, Reorganization Plan No. 1 of December 1993	Natural Resources Administration	\$73,837	WS-2, WS-4, WS-5, WS-6, WS-7, WS-8, WS-11, WS-12, WS-14, WS-15, HW-1, HW-2, HW-3, HW-4, HW-5, HW-6,
		Solid Waste Authority	\$7,293	HW-7, HW-8, HW-9, HW-10, HW-13, HW-14, HW-15, HW-16, HW-17, AD-1, AD-2, AD-3, AD- 4, AD-5, AD-6 , AD-7, PI- 1, PI-2, PI-5
Puerto Rico Department of Recreation and Sports (DSR)	Law No. 126 of June 1980, as amended	Physical Infrastructure Program	\$13,435	HW-17, PI-1
		Planning and Technical Sports Training Program	\$587	

San Juan Bay Estuary Program

Table 10. Possible funding sources for the financing of actions by state government agencies.

Governmental Agency/ Public Corporation	Legal Basis	Selected Programs That Could Finance Actions	Estimated Budget For 2000-2001 (Thousands \$)	Actions That Could Be Financed By The Identified Programs *
Puerto Rico Department of Transportation and Public	Article IV, Section 6 of the Constitution of the	Property Acquisition and Administration Program	\$132	WS-1, WS-5, WS-8, HW-16, AD-7
Works (DTPW)	Commowealth of Puerto Rico, Law No. 6 of 1952, Reorganization Plan No. 6 of 1971.	Design and Reconstruction of Roads Program	\$37,401	
		Beautification and Ornateness of Community and Touristic Areas Program	\$8,597	
		Maintenance and Conservation of Roads Program	\$39,177	
		Puerto Rico Highway and Transportation Authority (PRHTA) - Operation and Maintenance of Highways Program	\$38,587	
Puerto Rico Electric Power Authority (PREPA)	Law No. 83 of 1941, Law No. 57 of 1979	Technical and Administrative Support Program	\$197,503	HW-11, HW-12
		Electric Power Transmission and Distribution Program	\$230,002	

Management Plan July 2000

 Table 10. Possible funding sources for the financing of actions by state government agencies.

Governmental Agency/ Public Corporation	Legal Basis	Selected Programs That Could Finance Actions	Estimated Budget For 2000-2001 (Thousands \$)	Actions That Could Be Financed By The Identified Programs *
Puerto Rico Environmental Quality Board (EQB)	Law No. 9 of June 1970	Analysis of Environmental Tests Program	\$900	WS-1, WS-2, WS-4 , WS-5, WS-7, WS-9 , WS-10 ,
		Improvements to Water Quality Program	\$4,530	WS-11 , WS-16, HW-2, HW-7, HW-11, HW-12, AD-4, AD-5 , PI-1, PI-2,
		Regulation of Land Pollution Program	\$2,646	PI-5
Puerto Rico Ports Authority (PRPA)	Law No. 17 of 1955, Reorganization Plan No. 6 of 1971	Administration and Conservation of Marine Facilities Program	\$54,863	WS-13 , WS-14, WS-15, HW-1, HW-4
Puerto Rico Tourism Company	Law No. 10 of June 1970, as amended, Reorganization	Physical Tourist Facilities Development Program	\$3,611	PI-5
	Plan No. 4 of June 1994	Tourism Promotion and Marketing	\$44,117	

^{*} Actions in "bold" indicate the agency leads one or more steps in action implementation.

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
10.410	Rural Housing Service (RHS), Department Of Agriculture	Very Low to Moderate Income Housing Loans	To assist very low and low-income families through direct loans to buy, build, rehabilitate, or improve housing and to provide the customer with a modest, decent, safe, and sanitary dwelling and related facilities as a permanent residence in rural areas. Subsidized funds are available on direct loans only for low and very low-income applicants. Nonsubsidized funds (loan making) are available for very low and low-income applicants who are otherwise eligible for subsidy, but, at the present time, the subsidy is not needed. Loan guarantees are also available to assist low and moderate income rural families in home acquisition.	WS-1, WS-2, WS-5	Direct Loans: FY 98 \$1,007,692,000; FY 99 (est.) \$965,313,000; and FY 00 (est.) \$1,100,000,000. Guaranteed loans: FY 98 \$2,822,488,000; FY 99 (est.) \$3,000,000,000; and FY 00 (est.) \$3,200,000,000
10.902	Natural Resources Conservation Service, Department Of Agriculture	Soil and Water Conservation	To plan and carry out a national natural resource conservation program, and to provide leadership in conservation, development, and productive use of the nation's soil, water, and related natural resources.	HW-4, HW-6, HW-8, PI-3, PI-4	Salaries and expenses: FY 98 \$534,557,253; FY 99 (est.) \$557,250,905; and FY 00 (est.) \$582,548,000
10.904	Natural Resources Conservation Service, Department Of Agriculture	Watershed Protection and Flood Prevention	To provide technical and financial assistance in carrying out works of improvement to protect, develop, and utilize land and water resources in small watersheds.	HW-4, HW-6, HW-8	Grants for watershed and flood prevention operations: FY 98 \$48,292,688; FY 99 (est.) \$45,859,265; and FY 00 (est.) \$35,708,000. Salaries and expenses, watershed and flood prevention operations: FY 98 \$42,425,134; FY 99 (est.) \$40,990,302; and FY 00 (est.) \$38,715,000
11.419	National Oceanic And Atmospheric Administration, Department Of Commerce	Coastal Zone Management Administration Awards	To assist states in implementing and enhancing Coastal Zone Management programs that have been approved by the Secretary of Commerce.	WS-9, WS-10, WS-15, HW- 17, PI-1, PI-3, PI-5	Grants: FY 98 \$49,700,000; FY 99 (est.) \$57,600,000; and FY 00 (est.) \$92,700,000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
11.427	National Oceanic And Atmospheric Administration, Department Of Commerce	Fisheries Development and Utilization Research and Development Grants and Cooperative Agreements Program	To increase greatly the Nation's wealth and quality of life through sustainable fisheries that support fishing industry jobs, safe and wholesome seafood, and recreational opportunities.	HW-17, HW- 18, PI-1	Grants: FY 98 \$2,004,489; FY 99 (est.) \$3,073,377; and FY 00 (est.) \$1,000,000
11.439	National Oceanic And Atmospheric Administration, Department Of Commerce	Marine Mammal Data Program	To support state agencies in the collection and analysis of information on marine mammals that occur in the state's waters and interact with state managed fisheries and other marine resources. Such information is used by the state and federal governments to conserve marine mammals and address or resolve conflicts between marine mammals, fisheries, and living marine resources.	HW-15	Cooperative Agreements: FY 98 \$2,866,478; FY 99 (est.) \$2,331,164; and FY 00 (est.) \$3,000,000
11.455	National Oceanic And Atmospheric Administration, National Marine Fisheries Service, Department Of Commerce	Cooperative Science and Education Program	To support through grants and cooperative agreements enduring partnerships between the federal government and institutions of research and higher education for cooperative science and education on marine issues, especially living marine resources and their habitat, that confront local, regional, and national resources managers; also, to award grants and cooperative agreements to develop innovative approaches and methods for marine and estuarine science and education.	PI-3, PI-4, PI-6	Cooperative agreements: FY 98 \$3,411,654; FY 99 (est.) \$3,018,907; and FY 00 (est.) \$2,028,907
11.473	National Oceanic And Atmospheric Administration, National Ocean Service, Department Of Commerce	Coastal Services Center	To support projects aimed at developing a science-based, multi-dimensional approach that will allow for the maintenance or improvement of environmental quality while at the same time allowing for economic growth.	PI-5, AD-1, AD-5	Grants/Cooperative Agreements: FY 98 (est.) \$1,800,000; FY 99 (est.) \$2,400,000; and FY 00 (est.) \$2,000,000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
14.218	Community Planning And Development, Department Of Housing And Urban Development	Community Development Block Grants/ Entitlement Grants	To develop 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.	WS-1, WS-2, WS-3, WS-4, AD-1, AD-5, PI-1, PI-2, PI-5	Grants: FY 98 \$2,936,640,000; FY 99 (est.) \$2,952,740,000; and FY 00 (est.) \$3,043,250,000
14.219	Community Planning And Development, Department Of Housing And Urban Development	Community Development Block Grants/Small Cities Program	To develop 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.	WS-1, WS-2, WS-3, WS-4, AD-1, AD-2, AD-5, PI-1, PI- 2, PI-5	General purpose discretionary funds: FY 98 \$59,034,000; FY 99 (est.) \$59,542,000; and FY 00 (est.) \$61,328,000
14.228	Community Planning And Development, Department Of Housing And Urban Development	Community Development Block Grants/State's Program	To develop 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.	WS-1, WS-2, WS-3, WS-4, AD-1, AD-2, AD-5, PI-1, PI- 2, PI-5	Grants: FY 98 \$1,199,526,000; FY 99 (est.) \$1,205,918,000; and FY 00 (est.) \$1,242,922,000
14.248	Office Of Community Planning And Development, Department Of Housing And Urban Development	Community Development Block Grants/Section 108 Loan Guarantees	To provide communities with a source of financing for economic development, housing rehabilitation, public facilities, and large scale physical development projects.	WS-1, WS-2, WS-3, WS-4, AD-1, AD-2, AD-5, PI-1, PI- 2, PI-5	Loan limitation: FY 98 \$1,261,000,000; FY 99 (est.) \$1,261,000,000; and FY 00 (est.) \$1,261,000,000
14.850	Public And Indian Housing, Department Of Housing And Urban Development	Public and Indian Housing	To provide and operate cost-effective, decent, safe, and affordable dwellings for lower income families through an authorized local Public Housing Agency (PHA).	WS-1, WS-2, WS-5	Operating Subsidies only: FY 98 \$2,973,970,722; FY 99 (est.) \$2,858,696,514; and FY 00 (est.) \$3,003,000,000



Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
14.857	Public And Indian Housing, Department Of Housing And Urban Development	Section 8 Rental Certificate Program	To aid low income families in obtaining decent, safe, and sanitary rental housing. HUD proposed regulations will, when implemented, merge this program with the Section 8 Voucher (14.155) program. Section 502 of the Public Housing Reform Act states that a purpose of the legislation is "consolidating the voucher and certificate programs for rental assistance under section 8 of the United States Housing Act of 1937 (the "USHA") into a single market-driven program that will assist in making tenant-based rental assistance more successful at helping low-income families obtain affordable housing and will increase housing choice for low-income families."	WS-1, WS-2, WS-5	(Includes 14.855) FY 98 \$7,930,592,000; FY 99 (est.) \$7,818,597,000; and FY 00 (est.) \$8,535,324,000
15.602	U.S. Fish And Wildlife Service, Department Of The Interior	Conservation Law Enforcement Training Assistance	To provide training assistance to state conservation officers in criminal law and the principles, techniques, and procedures of wildlife law enforcement.	WS-11, WS- 12, HW-9, HW-14, PI-8	Salaries and expenses: FY 98 \$443,000; FY 99 (est.) \$469,000; and FY 00 (est.) \$491,000
15.605	U.S. Fish And Wildlife Service, Department Of The Interior	Sport Fish Restoration	To support projects designed to restore and manage sport fish populations for the preservation and improvement of sport fishing and related uses of these fisheries resources.	HW-17, HW- 18, PI-8	Grants: FY 98 \$291,347,979; FY 99 (est.) \$212,429,143; and FY 00 (est.) \$259,515,001
15.611	U.S. Fish And Wildlife Service, Department Of The Interior	Wildlife Restoration	To support projects to (1) restore or manage wildlife populations and the provision of public use of these resources, and (2) provide facilities and services for conducting a hunter safety program.	HW-4, HW-6, HW-8, HW-9, HW-10, HW- 13, HW-14, PI-1, PI-5	Grants: FY 98 \$193,874,600; FY 99 (est.) \$165,353,469; and FY 00 (est.) \$178,480,001
15.614	U.S. Fish And Wildlife Service, Department Of The Interior	Coastal Wetlands Planning, Protection, and Restoration Act	To grant funds to coastal states to carry out coastal wetlands conservation projects.	HW-1, HW-3, HW-5, HW-16	Grants: FY 98 \$10,266,122; FY 99 (est.) \$9,439,000; and FY 00 (est.) \$11,269,000
15.615	U.S. Fish And Wildlife Service, Department Of The Interior	Cooperative Endangered Species Conservation Fund	To provide federal financial assistance to any state, through its appropriate state agency, which has entered into a cooperative agreement to assist in the development of programs for the conservation of endangered and threatened species.	HW-9, HW- 10, HW-13, HW-14, HW- 15	Grants: FY 98 \$20,981,000; FY 99 (est.) \$13,520,000; and FY 00 (est.) \$76,520,000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
15.617	U.S. Fish And Wildlife Service, Department Of The Interior	Wildlife Conservation and Appreciation	To establish a partnership among the U.S. Fish and Wildlife Service, designated state agencies, and private organizations and individuals to (1) carry out wildlife conservation and appreciation projects to conserve the entire array of diverse fish and wildlife species in the United States and to provide opportunities for the public to use and enjoy these fish and wildlife species through nonconsumptive activities; (2) enable designated state agencies to respond more fully and utilize their statutory and administrative authorities by carrying out wildlife conservation and appreciation projects; and (3) encourage private donations, under leadership of the National Fish and Wildlife Foundation, to carry out wildlife conservation and appreciation projects.	HW-9, HW- 10, HW-13, HW-14, HW- 15, PI-1, PI-3, PI-4, PI-5	Grants: FY 98 \$951,456; FY 99 (est.) \$768,000; and FY 00 (est.) \$768,000
15.618	U.S. Fish And Wildlife Service, Department Of The Interior	Administrative Grants for Federal Aid in Sport Fish and Wildlife Restoration	To grant funds for projects which assist in the administration of sport fish and wildlife restoration programs and which facilitate the efforts of the states in implementing these programs.	HW-9, HW- 10, HW-14, HW-15, HW- 17, HW-18	Grants: FY 98 \$4,334,342; FY 99 (est.) \$3,765,000; and FY 00 (est.) \$4,000,000
15.916	National Park Service, Department Of The Interior	Outdoor Recreation: Acquisition, Development, and Planning	To provide financial assistance to the states and their political subdivisions for the preparation of Statewide Comprehensive Outdoor Recreation Plans (SCORPs) and acquisition and development of outdoor recreation areas and facilities for the general public, to meet current and future needs.		Grants: FY 98 \$0; FY 99 (est.) \$0; and FY 00 (est.) \$0
15.919	National Park Service, Department Of The Interior	Urban Park and Recreation Recovery Program	To provide federal grants to local governments for the rehabilitation of recreation areas and facilities, demonstration of innovative approaches to improve park system management and recreation opportunities, and development of improved recreation planning.	PI-1. PI-2, PI-5	Grants: FY 98 \$0; FY 99 (est.) \$0; and FY 00 (est.) \$4,000,000

n Juan Bay tuary Progran

Management Plan July 2000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
20.219	Federal Highway Administration, Department Of Transportation	Recreational Trails Program	To provide funds to the states to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses.	PI-1, PI-2, PI-5	Grants: FY 98 \$14,691,339; FY 99 (est.) \$40,000,000; and FY 00 (est.) \$50,000,000. NOTE: The amounts above assume \$15 million in carryover funds each year. In FY 98, \$30 million was available; in FY 99, \$40 million was available; for FY 2000-2003, \$50 million will be available annually in contract authority. Many states had one combined grant round for FY 98 and 99
66.419	Office Of Water, U.S. Environmental Protection Agency	Water Pollution Control: State and Interstate Program Support	To assist states (including territories, the District of Columbia, and Indian Tribes qualified under Section 518(e)) and interstate agencies in establishing and maintaining adequate measures for prevention and control of surface and ground water pollution.	WS-3, WS-4, WS-9, WS-10, WS-12, WS- 16, AD-3, AD- 4, AD-5, PI-2	Grants: FY 98 \$95,529,300; FY 99 (est.) \$115,529,300; and FY 00 (est.) \$115,529,300
66.454	Office Of Water, U.S. Environmental Protection Agency	Water Quality Management Planning	To assist states (including territories and the District of Columbia), Regional Public Comprehensive Planning Organizations (RPCPOs), and Interstate Organizations (IOs) in carrying out water quality management (WQM) planning.	WS-9, WS-16, PI-3	Grants: FY 98 \$14,300,000; FY 99 (est.) \$14,200,000; and FY 00 (est.) \$9,500,000

San Juan Bay Estuary Program

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
66.456	Office Of Water, U.S. Environmental Protection Agency	National Estuary Program	To convene Management Conferences with participants from state legislatures, interstate or regional environmental agencies, state agencies, local governments or other public or nonprofit private agencies, research institutions and individuals to develop programs to protect and restore coastal resources in estuaries of national significance. The program objective is to develop a Comprehensive Conservation and Management Plan for each estuary designated by the USEPA Administrator. The program characterizes the problems in the estuary, determines relationships between pollutant loading and impacts on living resources, and develops a comprehensive plan recommending solutions to priority problems. Potential implementation includes basin-wide reduction of point and nonpoint sources of pollution and basin-wide resource management programs.	PI-3	Grants: FY 98 \$12,600,000; FY 99 (est.) \$12,600,000; and FY 00 (est.) \$12,600,000
66.461	Office Of Water, U.S. Environmental Protection Agency	Wetlands Protection: Development Grants	To assist states, tribes, and local governments in developing new or enhancing existing wetlands protection, management, and restoration programs.	HW-1, HW-3, HW-5, HW-16	Grants: FY 98 \$15,000,000; FY 99 (est.) \$15,000,000; and FY 00 (est.) \$15,000,000
66.463	Office Of Water, U.S. Environmental Protection Agency	National Pollutant Discharge Elimination System Related State Program Grants	To assist states, tribes, interstate agencies, and other public or nonprofit organizations in developing, implementing, and demonstrating innovative approaches relating to the National Pollutant Discharge Elimination System (NPDES) program, such as watershed approaches for combined sewer overflow and storm water discharge problems, pretreatment and sludge (biosolids) program activities, and alternative ways to measure the effectiveness of point source programs.	WS-3, WS-16	FY 98 \$19,000,000; FY 99 (est.) \$19,000,000; and FY 00 (est.) \$19,000,000
66.467	Office Of Water, U.S. Environmental Protection Agency	Wastewater Operator Training Grant Program (Technical Assistance)	To substantially enhance the proficiency of personnel engaged in the operations and maintenance of treatment works and related activities by financing pilot programs.	WS-3, WS-4	Grants: FY 98 \$1,794,000; FY 99 (est.) \$1,794,000; and FY 00 (est.) \$294,000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
66.605	U.S. Environmental Protection Agency	Performance Partnership Grants	To provide states and tribes with greater flexibility to address their highest environmental priorities, improve environmental performance, achieve administrative savings, and strengthen partnerships between USEPA and the states or tribes. The Performance Partnership Grants (PPGs) are an alternative assistance delivery mechanism and do not represent funding in addition to grants provided under individual authorities.	WS-1, WS-2, WS-5	Grants: FY 98 \$98,705,695; FY 99 (est.) \$100,000,000; and FY 00 (est.) \$100,000,000
66.606	U.S. Environmental Protection Agency	Surveys, Studies, Investigations, and Special Purpose Grants	(1) To support surveys, studies, and investigations and special purpose assistance associated with Air Quality, Acid Deposition, Drinking Water, Water Quality, Hazardous Waste, Toxic Substances, and Pesticides; (2) to identify, develop, and demonstrate necessary pollution control techniques; to prevent, reduce, and eliminate pollution; and (3) to evaluate the economic and social consequences of alternative strategies and mechanisms for use by those in economic, social, governmental, and environmental management positions.	WS-10, WS- 16	Grants and Cooperative Agreements: FY 98 \$376,932,078; FY 99 (est.) \$300,000,000; and FY 00 (est.) \$300,000,000
66.651	Office Of Administration, U.S. Environmental Protection Agency	Sustainable Development Challenge Grants	(1)To catalyze community-based projects that promote sustainable development; (2) to leverage private and public investments to enhance environmental quality by enabling community sustainability efforts to continue past USEPA funding; and (3) to build partnerships that increase a community's capacity to ensure long-term ecosystem and human health, economic vitality, and community well-being.	AD-1, AD-2	Grants: FY 98 \$5,000,000; FY 99 (est.) \$4,700,000; and FY 00 (est.) \$4,700,000
66.708	Office Of Prevention, Pesticides And Toxic Substances, U.S. Environmental Protection Agency	Pollution Prevention Grants Program	To support state and tribal level pollution prevention programs that address the reduction of pollutants across all environmental media: air, land, and water.	PI-3, PI-4, PI-6	Grants: FY 98 \$5,117,047; FY 99 (est.) \$4,995,000; and FY 00 (est.) \$5,000,000

Table 11. Possible sources of funds for the financing of actions by federal assistance programs.

CFDA* Number	Agency	Program	Objectives	Related Actions	Available Funding
66.950	Office Of Environmental Education, U.S. Environmental Protection Agency	Environmental Education and Training Program	To train educational professionals in the development and delivery of environmental education programs.	PI-3, PI-4, PI-6	Grants: FY 98 \$1,950,000; FY 99 (est.) \$1,625,000; and FY 00 (est.) \$1,625,000

*Code of Federal Domestic Assistance

Source: Catalog of Federal Domestic Assistance



Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
MUNICIPALITY OF CATAÑO				
Construction of sanitary sewer system on Calle 8, Palmas Sector	75,099		WS-1, WS-4	
Construction of pedestrian walkway between Antiguo Varadero and the "Público" car terminal	6,000,660			Possible generation of sediments
Construction of parking and commercial facilities in the area of "Paseo de los Puertos"	1,500,000			Possible generation of sediments
Subtotal Municipality of Cataño	7,575,759			
MUNICIPALITY OF GUAYNABO				
Design and construction of the Brisas de Sabana project as part of the Master Plan for the Coastal Zone of Guaynabo. This project includes the on-site rehabilitation of the communities of Sabana, Vietnam, and Sabana Norte and includes the following projects:	3,500,000			
- Property appraisal and acquisition of affected structures	2,800,000			
- Design and construction of a water distribution system and sanitary sewer system	642,850		WS-1, WS-4	
- Design and construction of storm sewer system	883,750		WS-1, WS-4	
- Design and construction of water distribution system	1,104,000			Possible generation of sediments
 Construction and improvements to the public lighting system 	686,500			Possible generation of sediments
- Dredging, design, and construction of the new Villa Pesquera	100,000		HW-18	
Subtotal Municipality of Guaynabo	9,717,100			
MUNICIPALITY OF SAN JUAN				
Improvements to storm sewer facilities in Barrio Obrero	311,372		WS-1, WS-4	

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
Construction of Plaza Tamarindo, Road Connector, improvement of land plots, and cleaning of drainage sewers in the Cantera area	35,606		WS-1, WS-9	
Design and construction of storm and sanitary sewers in Barrio Obrero, Santurce	4,500,000		WS-1, WS-4	
Improvements to storm sewer at Hill Brothers, Río Piedras	2,966,806		WS-1, WS-4	
Improvements to the Quebrada Bacalao Channel, Río Piedras	420,000		WS-9	
Construction of channel at Bechara	355,000		WS-9	
Acquisition of property, relocation of families, and demolition of structures at Ultimo Chance	2,582,300		WS-2	
Construction of new housing units at Los Pinos Cantera	140,000		WS-2	
Construction of new housing units at Los Pelicanos Community, Cantera I	620,000		WS-2	
Construction of new housing units at Los Pelicanos Community, Cantera II	4,600,000		WS-2	
Construction of new housing units at Las Virtudes	4,000,000		WS-2	
Rehabilitation of Barriada Figueroa, Santurce	729,590		WS-4	
Subtotal Municipality of San Juan	21,260,674			
MUNICIPALITY OF CAROLINA				
Improvements to sannitary sewer and storm sewer lines within the central business district	120,000		WS-4, WS-9	

Improvements to sannitary sewer and storm sewer lines within the central business district	120,000	WS-4, WS-9	
Construction of the Carolina Lineal Park, from Muñoz Rivera Ave.and 65 th Infantry St., through Paseo del Río, Monserrate Ave., Paseo de los Gigantes, Julia de Burgos Park, up to Piñones Lagoon and Balneario de Carolina	3,100,000	PI-1	
Construction of Paseo Lago Blasina	4,047,240	PI-1	

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
Construction of Paseo Balneario Carolina, Road 887	1,075,624		PI-1	
Improvements to sanitary and storm sewers and other improvements in the Villa Malanga Sector, Buenaventura Ward	648,000		WS-1, WS-4	
Subtotal Municipality of Carolina	8,990,864			

MUNICIPALITY OF TOA BAJA

(Information not available)

PUERTO RICO ELECTRIC POWER AUTHORITY

Official Capital Improvements Program 1999-00

Projects by Municipality

7707	Rehabilitation of the Boquilla Turbine	190,000	HW-11, HW-12	
8488	Improvements to the Boquilla Turbine (PS 1-2 APPS)	142,000	HW-11, HW-12	
12243	Replacement of water heating shooting mechanisms U1 and 2	95,000	HW-11, HW-12	
13509	Towing and transportation of platforms for floating barriers	15,000		Possible adeverse effects
13510	Acquisition of oil spill equipment	15,000	WS-11, WS-13	
	Maintenance of security barrier for Combustible Transfer Line CSJ-CPS	15,000	WS-11, WS-13	
	Construction of sanitary sewer discharge system (PS)	150,000	WS-1, WS-4	
	Construction of new sanitary sewer main line at Palo Seco	1,400,000	WS-1, WS-4	
12245	Rehabilitation of feeding pumps PS 3 and 4	527,000		Details unknown
12246	Rehabilitation of feeding pumps PS 1 and 2	524,000		Details unknown

San Juan Bay Estuary Program

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
Improvements to cooling system units 9 and 10	283,000		WS-10, HW-11, HW- 12	
12300 Closing of water channels, cooling units 1-4	38,000		WS-10, HW-11, HW- 12	
Subtotal Puerto Rico Electric Power Authority	3,394,000			

PUERTO RICO AQUEDUCT AND SEWER AUTHORITY

Capital Improvements Program 2000-2004

1-66-5005	Elimination of Navy Station, San Juan	165,000		WS-3	
1-66-5005/66-	A-902 Rehabilitation of pumping station at Puerto Nuevo, San Juan	360,500	WS-3, Step 3.2	WS-3	
1-66-5006	Construction of sanitary sewer laterals in the Cantera Sector, San Juan	3,500,000	WS-1, Step 1.5	WS-1	
1-66-5007	Construction of sanitary sewer laterals in La Playita and el Checo Sectors, San Juan	3,000,000	WS-1, Step 1.5	WS-1	
1-66-5025	Rehabilitation of sanitary sewer , Martín Peña Channel, San Juan	7,680,000	WS-1, Step 1.5	WS-1	
1-66-5035	Construction of new sanitary trunk and pumping station, Tokio, San Juan	17,999,500	WS-3, Step 3.2	WS-1, WS-3	
1-66-5040/56-	A-500 Elimination of pumping stations and sanitary trunks at Los Laureles	453,700	WS-3, Step 3.2	WS-3	
1-66-5045	Construction of sewer lines underneath the City Dump, San Juan	20,210,500	WS-3, Step 3.2	WS-3	
1-66-5060/56-	A-600 Elimination of pumping station, Condado, San Juan	5,447,300		WS-3	
1-16-8050/53-	A-921 Replacement of ejectors for Isla Verde Pump, Balneario Sector, San Juan	175,100		WS-3	

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

	Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
1-66-8001	Rehabilitation of sanitary line, Humacao Street, Hipódromo Development, Santurce, San Juan	80,000		WS-3	
1-01-6006	Construction of sewer system for Mires, Los Filtros II, Guaynabo	300,000		WS-3	
1-32-5003/53-	1-900 Elimination of pumping station and sanitary line at Los Alamos, Guaynabo	439,000		WS-3	
1-32-5010/66-	A-901 Rehabilitation of main sanitary line (10") at Tintillo, Guaynabo	1,406,200		WS-3	
1-01-9058/63-	-G-431 Rehabilitation of pumping station at Río Bayamón, Guaynabo	944,900		WS-3	
1-32-8031	Replacement of ejectors for pumps, Gardenville, Guaynabo	133,000		WS-3	
1-01-7025	Improvements to water system at Mosquito, Medianía Alta Ward, Loíza	392,000		WS-1	
1-72-5000/66-	-A-701 Elimination of pumping station at Villas del Sol, Trujillo Alto D/C	615,000		WS-3	
1-72-5020/66-	A-700 Construction of sanitary line on Route PR-848, Wonderville Development, Trujillo Alto	800,000		WS-1	
1-15-5025	Elimination of or improvements to ejectors at La Victoria, La Cerámica, Vista Mar, and Carolina Pueblo, Carolina	1,666,500		WS-3	
1-16-5006	Elimination of ejector station at Martín González, Carolina	553,000		WS-3	
1-16-8002	Replacement of ejectors for pump at Vistamar Marina, Carolina	133,000		WS-3	
1-16-8003	Replacement of ejectors for pump at La Victoria, Carolina	133,000		WS-3	

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

	Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
1-16-8007	Replacement of ejectors for pump at La Cerámica, Carolina	133,000		WS-3	
1-16-8008	Replacement of ejectors for pump at Carolina Pueblo, Carolina-Cambio	133,000		WS-3	
1-16-8025	Intstallation of 8" sewer line at Martín González Ward, Carolina	96,000		WS-3	
1-16-8060/63-	A-407 Replacement of ejectors for pump at Puerto Nuevo (Andalucía Avenue), Carolina	126,800		WS-3	
9	Subtotal Puerto Rico Aqueduct and Sewer Authority	67,076,000			

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

Puerto Rico Highway and Transportation Authority Capital Improvements, Construction

0027	Replacement of Bridge #87 over Martín Peña Channel, Km. 2.4, PR-27	5,000,000	Possible generation of sediments
0001	Installation of temporary bridge over San Antonio Channel, San Juan	3,434,916	Possible generation of sediments
0025	Demolition and construction of Bridge #86 over San Antonio Channel, San Juan	7,720,000	Possible generation of sediments
0026	Construction of Baldorioty de Castro Bridge Boulevard, from the intersection of PR-5 (Condado Lagoon) to Villaverde St. in Miramar, San Juan (Triangulo Dorado)	9,466,805	Possible generation of sediments
0026	Completion of schematic design for San Antonio Tunnel, San Juan	1,114,000	Possible generation of sediments
0001	Rehabilitation of Bridge #2013, PR-1, Km.12.5 over Río Piedras River (UPR Estación Experimental), San Juan	300,000	Possible generation of sediments
0002	Rehabilitation of Bridge #690, PR-2, Km. 0.9, La Constitución over Martín Peña Channel, San Juan	5,482,711	Possible generation of sediments



Management Plan July 2000

Table 12. Relation of capital improvement projects programmed by state government agencies and municipalities to proposed actions in the CCMP.

	Project Description	Cost (\$)	Similar Actions	Supportive Or Complementary Actions	Comments
	Demolition of temporary bridge on PR-1 and PR-25, San Juan	400,000			Possible generation of sediments
0000	Replacement of Bridge #1750 (Dos Hermanos), Ashford Ave., Km.0.30, Laguna del Condado,San Juan	7,925,000			Possible generation of sediments
0001	Demolition and construction of Bridge #1, Km.3.80 over San Antonio Channel, Fernandez Juncos Ave. and Muñoz Rivera Expressway, San Juan	9,838,524			Possible generation of sediments
0001	Improvements to Muñoz Rivera Expressway and access to Miramar Marine Front and improvements to overpass from Muñoz Rivera Expressway to System:M-San Juan Metropolitan Area, San Juan	17,060,000			Possible generation of sediments
0187	Construction of bicycle pathway, Piñones, from Boca de Cangrejo Bridge to Loíza Plaza, Phase I and Phase II (Paseo Lineal), Carolina	7,153,940		PI-1	
0187	Development of erosion control project for Route PR-187 (Punta Maldonado) (Paseo Piñones), Loíza	5,681,175		WS-9	
187	Construction of kiosk for "Paseo de Piñones" Project, Loíza	2,010,000		PI-1	
0187	Development of erosion control measures for Route PR- 187, Piñones, Loíza	2,045,000		WS-9	
0187	Completion of mitigation on PR-187, Proyecto Paseo de Piñones and PR-66, Loíza	Not available		PI-1	
	Subtotal Department of Transportation and Public Works	84,632,071			
	GRAND TOTAL	\$202,646,468			