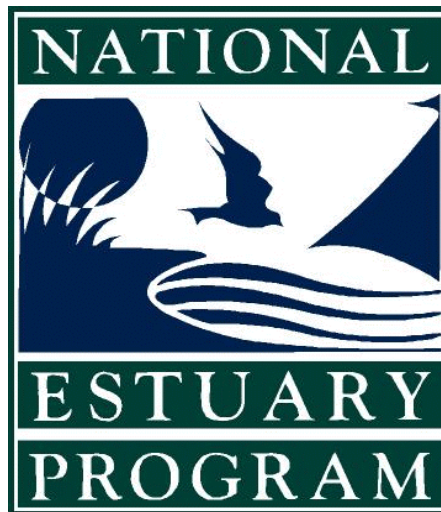


Case Study of EPA Fund Leveraging in the Coastal Bend Bays & Estuaries Program



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Executive Summary

Purpose

This report documents how the Coastal Bend Bays & Estuaries Program (CBBEP) leveraged \$1.13 million of funding from the US Environmental Protection Agency (EPA) to obtain nearly \$9 million in additional funds from state, local, and other sources over the 1999-2001 period. This leveraging success may help CBBEP convince potential supporters to provide additional resources. The study also presents a methodology that National Estuary Programs (NEPs) can use to organize their funding information and develop leveraging estimates of their own. The term “leveraging” is used to describe the use of one set of funds to obtain additional funds.

Approach

Through reviews of earlier leveraging studies and analyses of selected NEP budgets, projects, and implementation reviews, consistent definitions and criteria were developed to determine what should be counted as leveraging. A summary of the criteria are provided in Figure ES-1. Budget and project information was collected from CBBEP and in-depth discussions were held with program staff to understand the details of their funding.

Results

During the three years from September 1998 through August 2001, CBBEP received \$1.13 million in EPA Section 320 funds.¹ Through a combination of appropriations, grants, and in-kind contributions, CBBEP raised an additional \$8.88 million; this results in a leveraging ratio of \$7.87 raised for every \$1 of EPA support (Figure ES-2). The combined total of Section 320 funds and leveraged resources equals more than \$10 million in resources devoted to implementing the Bays Plan in 1999, 2000, and 2001. Also, the rate of leveraging increased dramatically from 1999 to 2001, reaching a level of approximately 20:1 in 2001.

¹Congress established the National Estuary Program (NEP) in 1987, under amendments to the Clean Water Act (Section 320). Section 320 authorizes EPA to provide grants to help protect and restore estuaries threatened by pollution, development, and overuse. Nominated by state governors and accepted by EPA’s Administrator, there are currently 28 estuaries in the Program representing 17 states and Puerto Rico. These estuary programs receive annual grants from EPA to develop and implement comprehensive conservation management plans that foster stakeholder involvement and cooperative, consensus-based actions that balance science and management. Grants are issued to the institutions that host the NEP, usually a state or local government, and have averaged \$300,000 to \$350,000 annually per NEP in recent years.

The study identified about 40 separate entities that have supported the program; the greatest contributors (Figure ES-3) were the State of Texas (34% of overall support), followed by corporations (19%), non-EPA federal agencies (16%), EPA (11%), local governments (10%), and non-profits (10%).

Figure ES-4 illustrates that CBBEP administered about one-third of the resources; non-profit organizations, state and local government entities, and universities administered the remaining funds.

Background

CBBEP is based in Corpus Christi, Texas and serves a twelve-county area which is home to more than 550,000 people. CBBEP is completing its third year of implementing the Bays Plan with over 50 implementation projects underway and a broad network of project partners in place.

Figure ES-1

What Was Counted: Three Criteria Had to be Met

| Criteria | Additional Discussion <i>[full report page reference]</i> |
|---|---|
| <p>1. Resources supporting NEP operations (staff, offices) or direct implementation of CCMP actions</p> <p style="text-align: center;"><i>AND</i></p> | <p>Include financial support as well as in-kind support</p> <p>C In-kind support included at market value: services valued at billing rates for appropriate individuals; government or non-profit staff valued at cost plus overhead; value of goods based on market prices; value of space or equipment based on market prices (<i>e.g.</i>, rent or lease prices) <i>[pp.18-19]</i></p> <p>C Volunteer contributions appropriate to include, but must be carefully tracked to avoid double-counting value included elsewhere; value of volunteers should be set based on market value for services provided <i>[pp.16, 19-20]</i></p> |
| | <p>Include resources that meet the criteria whether administered by the NEP or not <i>[p.10]</i></p> |
| | <p>Time and effort to document every contribution to a project would be excessive; need to focus efforts on major sources <i>[p.20]</i></p> |
| | <p>Recognize not all benefits of NEP involvement can be monetized (<i>e.g.</i>, credibility, trust, mediation) <i>[p.15]</i></p> |
| <p>2. NEP played key role in obtaining the resources</p> <p style="text-align: center;"><i>AND</i></p> | <p>Include resources for which NEP applied directly (grants, special funding) <i>[p.12]</i></p> |
| | <p>Include resources directed to CCMP implementation by NEP, even if funds not raised directly by NEP (<i>e.g.</i>, SEP funds channeled to CCMP tasks through NEP involvement) <i>[p.12]</i></p> |
| | <p>Include support to separate entities that NEP caused to come into existence (<i>e.g.</i>, a local land trust that received start-up funding from NEP) <i>[p.13]</i></p> |
| | <p>Include total value of partnering efforts where NEP funds were critical to the viability of the project (<i>e.g.</i>, used as matching funds). <i>[p.13]</i></p> |
| | <p>Exclude value of pre-existing, ongoing efforts by other agencies and entities that are independent of the CCMP (<i>e.g.</i>, exclude permitting and review activities of state regulators) <i>[pp.8, 10]</i></p> |
| <p>Exclude total value of ongoing programs to which NEP is only a minor supporter (<i>i.e.</i>, where the involvement of the NEP is not crucial to the viability of the program). Do include NEP's contribution to the effort, however. <i>[pp.13-15]</i></p> | |
| <p>3. Resources committed between September 1998 and August 2001 (3 fiscal years)</p> | <p>Resources committed during the period, rather than when funds are received or expended <i>[p.11]</i></p> |
| | <p>Exclude funds carried over from years before the study period; avoid double-counting of carry-over and unused funds <i>[p.11]</i></p> |
| | <p>Include full value of multi-year contributions in the year in which they are committed <i>[p.11]</i></p> |

Figure ES-2

Leveraging Success of CBBEP: 1999-2001

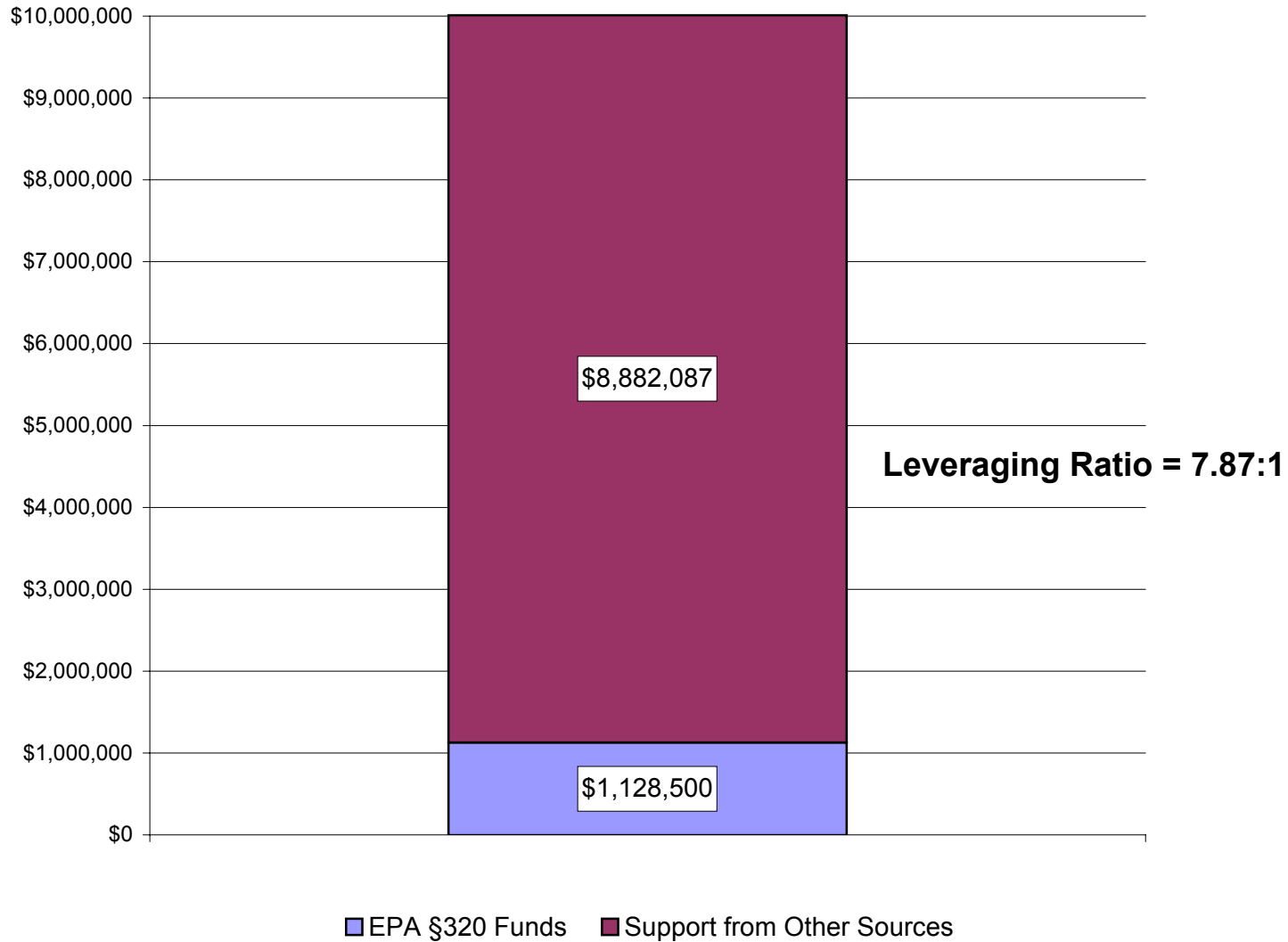


Figure ES-3

Sources of Financial and In-Kind Support for CBBEP: 1999-2001

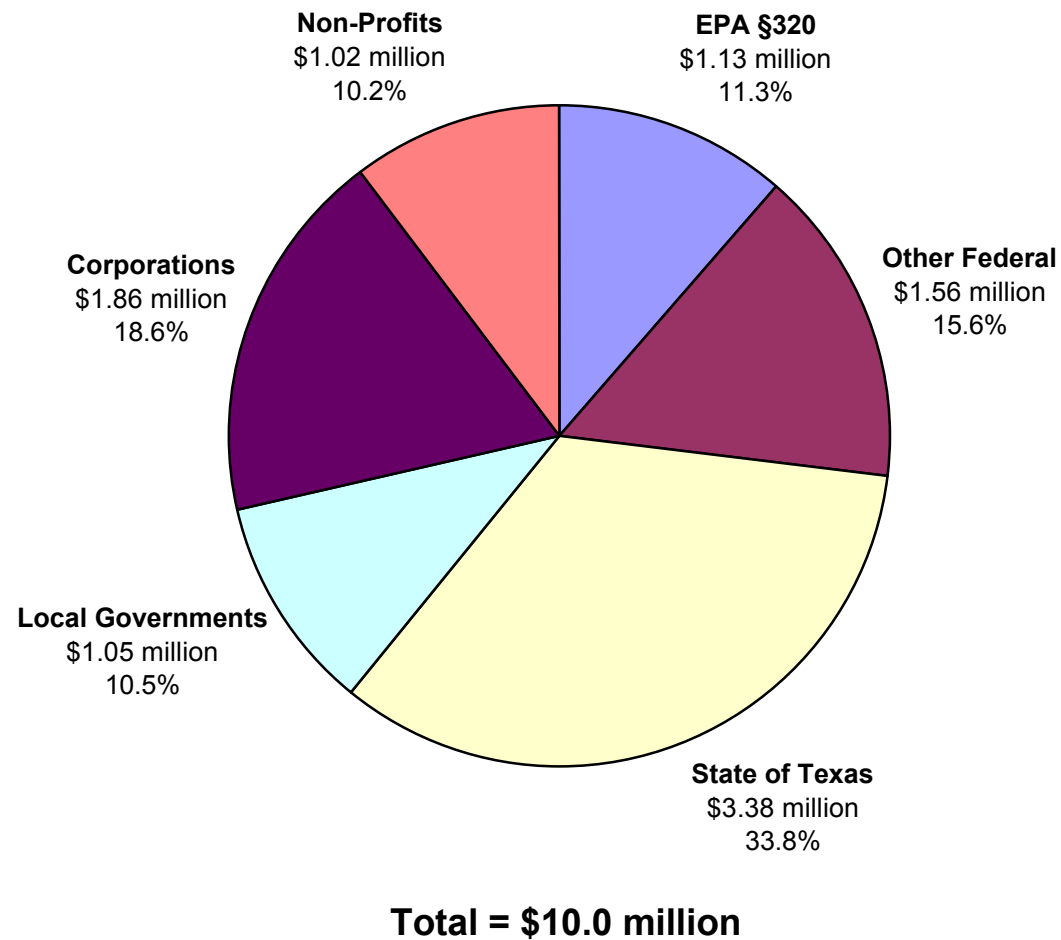
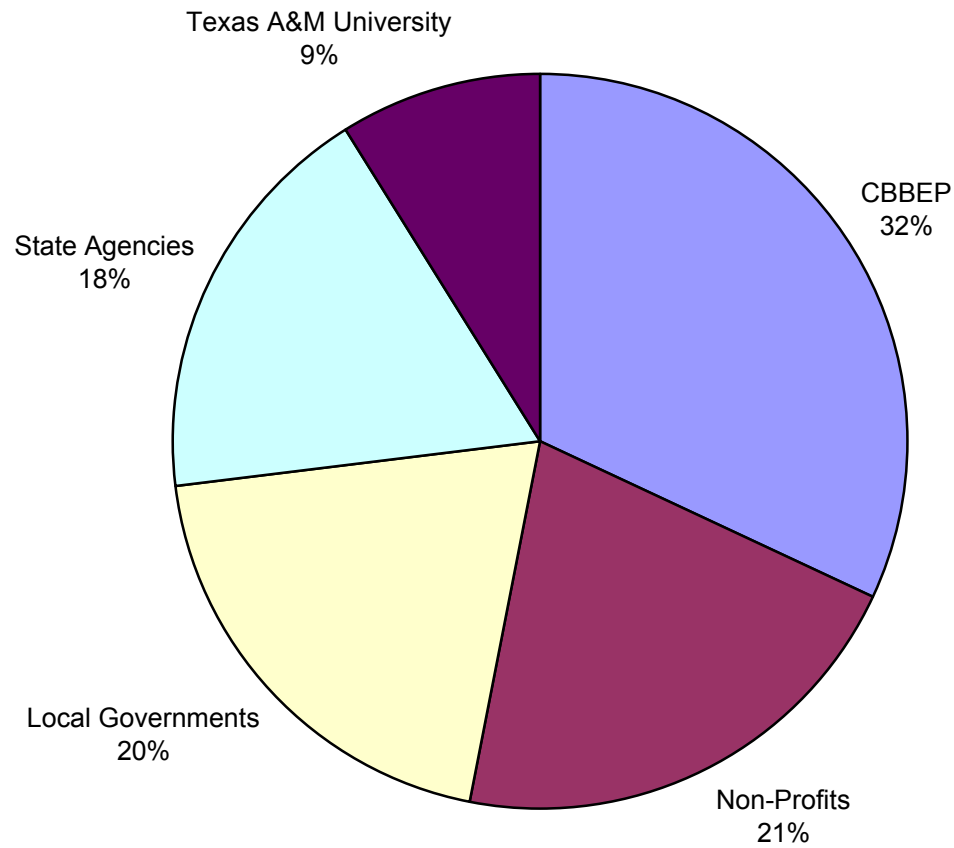


Figure ES-4

Who Administered Bays Plan Resources: 1999-2001?



1. Introduction

Through the National Estuary Program (NEP), the US Environmental Protection Agency (EPA) supports the work of 28 estuary programs throughout the United States. These local organizations target a broad range of issues affecting their regions: water quality; chemical, physical, and biological properties of the estuarine system; and the economic, recreational, and esthetic values of the area. The agenda for each NEP is set by its Comprehensive Conservation and Management Plan (CCMP), which outlines plans for protecting the estuary and its resources.

EPA funds for the 28 programs account for only part of the revenue raised to support program operation and CCMP implementation. These federal dollars, provided under Section 320 of the Clean Water Act, also play an important role in generating additional funds to support estuary programs.

1.1 Purpose of the Project

The primary objective of this pilot project is to examine how much additional funding and support for estuary programs result from the investment of these Section 320 funds. The term “leveraging” is used to describe the additional resources committed to a project, over and above the seed money provided by EPA. In general terms, leveraging occurs when federal funds are used to generate funds and support from any other sources. Federal funds may support staff who write grant proposals, work with state and local partners, and combine resources (financial and personnel) to launch programs that would have been beyond the reach of any individual participant.

EPA’s Coastal Management Branch (CMB), which oversees the work of the NEPs, has several reasons for seeking out this information:

- C Document the impressive success of the NEPs in stretching EPA funding to support a wide range of projects
- C Develop a methodology for defining and measuring leveraging, so all NEPs can use a similar approach
- C Illustrate the breadth and creativity of funding sources used to support estuary programs
- C Assist NEPs in collecting funding information required for periodic reporting to EPA, such as Implementation Reviews

1.2 Benefits of a Case Study Approach

Previous efforts to measure leveraging in the NEPs were hampered by a lack of consistent definitions and criteria for what should be counted as leveraging. This uncertainty, combined with the diversity among the NEPs with respect to their stage of development, funding sources, and program partners suggested that case studies of leveraging would be more productive than a survey of all 28 NEPs.

The case study approach is also more conducive to an examination of the *process* of collecting the information, not just getting the results. Working closely with selected NEPs would permit CMB to evaluate and refine the definitions and the process used to obtain the information. CMB not only wanted to obtain reliable results, but also to highlight the most important issues that arose in measuring leveraging, to provide consistent guidance for how to count resources committed to NEP operation and CCMP implementation, and to evaluate the value of the exercise. Clearly, compiling the information requires a commitment of resources by both EPA and the NEP: it is important that CMB assess whether the information is worth the effort required to obtain it, and to evaluate ways of obtaining the information more efficiently.

1.3 Scope of the Effort

The study does provide an opportunity to compute the total resources committed to the operation of an estuary program, to examine the issues about what to include and what not to include when totaling the figures, and to assess the best way to collect the information.

The study does not provide a measuring stick for ranking or comparing NEPs; the diverse circumstances surrounding funding, state and local support, and the local environmental issues would diminish the value of any such comparison. It is also worth noting that the study is not intended to provide complete information about the various funding sources and program partners cited. Funding sources are noted for reference purposes, but information about how funding was obtained is not included. An NEP financing handbook and related website are under development by CMB and will provide sources for this kind of information.

1.4 Outline of the Report

The remainder of the report outlines the process for obtaining the information and the results.

- C Chapter 2 describes the process for selecting the first NEP for study and working with the staff and project partners to refine the project scope and gather the information.
- C Chapter 3 reviews the methodological issues encountered in developing the questionnaire and sifting through the data.

- C Chapter 4 provides the results of the leveraging study, showing the degree of leveraging and various statistics about funding sources.
- C Chapter 5 concludes with a discussion of lessons learned from the pilot.

2. Process for Conducting the First Pilot Study

Before selecting the pilot study participants, CMB prepared several background documents to propose and refine an approach for the pilot study. These documents laid out the purpose of the analysis, the proposed approach, and the expected results. This background work was informed by previous efforts to measure leveraging that had been undertaken in 1998 and 1999 for the Association of National Estuary Programs (ANEP). The leveraging data were tabulated by Dr. Joseph Costa of the Buzzards Bay (Massachusetts) Project NEP.²

In the summary report, Dr. Costa referenced two specific problems encountered in the exercise: the difficulty of quantifying implementation expenditures where the NEP was not administering the funds and the inconsistency in how NEPs attributed funding by other agencies to CCMP implementation. This study addresses these issues by making explicit assumptions about what to include as leveraging.

2.1 Selection of CBBEP

The pilot leveraging study was performed in cooperation with the Coastal Bend Bays & Estuaries Program (CBBEP). This estuary program is based in the Coastal Bend of Texas, a twelve-county area which is home to more than 550,000 people. The Coastal Bend bays system is the common link among a vast deepwater port and petrochemical complex; commercial fisheries; tourism; a biologically diverse zone for bird, fish, and important habitat; and regional agriculture. The program's office is located in Corpus Christi, the largest city in the Coastal Bend. CBBEP completed its CCMP (the Bays Plan) in 1998, and is now in its third year of implementation. The program has moved quickly to begin work on over 50 implementation projects and has a broad network of project partners in place.

Several factors contributed to the selection of CBBEP as the subject of the first leveraging pilot. First was the expression of interest and cooperation from the CBBEP's Executive Director, Ray Allen. Second was the range of project partners and implementation projects underway; this diversity in projects and partners provided a rich mix of issues to be addressed in developing a methodology for measuring leveraging. While each NEP would certainly face unique issues in calculating leveraging of its EPA funds, CMB believes that many of the issues are shared by most if not all of the estuary programs. By conducting the pilot with a program with many projects underway, CMB hoped to provide useful examples and guidance for other programs.

² "Funding of National Estuary Programs Through Section 320 of the Clean Water Act in Comparison to Other Funding Sources," prepared by Joseph E. Costa, Ph.D., Executive Director, Buzzards Bay Project National Estuary Program for the Association of National Estuary Programs, May 1, 1999.

2.2 Initial Arrangements with CBBEP

Following preliminary discussions, CMB and CBBEP met to review the proposed approach for collecting the information including the process that would be followed. CMB sought CBBEP input on the format for collecting information and the assumptions proposed for use in determining what resources to include as leveraging and what to exclude. These comments, noted below, were incorporated into the final interview guide that was used for data collection.

CMB had also obtained contractor support to conduct the information collection, in order to provide an independent perspective on how to compile the data, to minimize the time commitment on the part of the NEP staff, and to provide consistency in approach across various NEPs. The contractor was assigned lead responsibility for revising the methodology, collecting the data, and preparing a report.

In the initial meeting, CMB reviewed the purposes of the study and then reviewed the parameters for the study. Several conclusions were reached at this meeting:

- C The study would examine CCMP implementation expenditures as well as the operating or administration costs of the CBBEP. Since staff time represents a significant contribution to the furtherance of the Bays Plan, the operating and project budgets would both be considered.
- C Funding and in-kind support would be measured for all implementation projects, regardless of whether CBBEP or a partnering entity administered the project. The administering entity would be tracked in the database for reference purposes.
- C The contractor would develop assumptions about how to value in-kind contributions and volunteer efforts as well as using its judgement about how far to pursue marginal contributions to projects. Further discussion of these issues is included in Chapter 3.
- C The time period for the analysis would be the first three years of implementation efforts. Because of a reorganization, CBBEP was unable to begin much work in FY1999, the first year of implementation. Because of the amount of carry-over between years, it would have been difficult to develop a meaningful analysis of only a single year. Timing issues remained critical in determining what funds to include as described in Chapter 3.

2.3 Data Collection: Document Review

Following the initial meeting, CBBEP provided copies of its work plans and budgets for the three subject years. The program also prepared a summary income statement for the three years, tallying the revenues committed or received by major source and the category of expenditure (operations, projects). The most useful background documents were a series of spreadsheets listing projects for each fiscal year and the allocation of funding sources for each project. These tables designated five separate funding sources for each project (as appropriate): EPA Section

320, State of Texas, carry-forward of funds from these sources from previous years, local governments, and other. These budgets did not reflect all costs associated with a project in many cases (*i.e.*, they excluded in-kind contributions or other support from project partners), but they provided a working list of funding sources for future use.

From these spreadsheets, CMB developed an electronic database to track funding sources and amounts, partners, administration, CBBEP project managers, time period, and contact information for each project. This database served as the checklist for subsequent interviews and the basis for the quantitative analysis presented in Chapter 4.

2.4 Data Collection: Site Visit and Interviews

On April 23 and 24, EPA and contractor staff visited CBBEP in Corpus Christi. The data collection began with an overview of the program's budget and major funding partners provided by Ray Allen and Contract Administrator Alice Sanchez. Because of her long service with the estuary program, Ms. Sanchez was able to provide a significant amount of information and contract documentation to provide the necessary information about funding sources and types.

Subsequently, the contractor met with several of the project managers to discuss individual projects they were managing, to answer questions, and to get contact information for project partners who were involved. This provided an important first step in expanding the scope of the analysis beyond measuring typical funding sources and capturing funds and in-kind support from other project partners. The way in which information was obtained varied by project manager and by individual projects. For some projects, the CBBEP manager had already obtained information from project partners about additional resources devoted to the projects. In other cases, the project managers made calls or sent e-mails requesting the information after the initial meeting. In some instances, the contractor collected the information based on contact information provided by the managers.

The CBBEP project managers were given flexibility to determine the most efficient and effective way of obtaining information. For contacts that might be difficult to reach, the managers made the calls themselves. In a few cases where calls were not returned, the contractor requested the project managers to try to enlist the cooperation of the project partner.

Another important aspect of the site visit was the opportunity to view a portion of the Bays area and to visit several project sites. This provided important background and familiarity which facilitated later interviews and discussions with other project participants. It was much simpler to develop a rapport with the many contacts having seen or at least read about their projects.

Following the site visits, the contractor conducted about 40 follow-up interviews. These included interviews with all of the CBBEP project managers and administrators; 12 state, local, and federal agency employees; and 25 contractors involved with implementation. This does not include requests for information made directly by the CBBEP project managers to contractors.

The data collection period covered about 60 days. In general, the data collection proceeded smoothly given the heavy workloads of many of the contacts and the difficulty of contacting those involved with field work on a regular basis.

2.5 Analysis

During the data collection, a number of issues arose about what funds to include or exclude from the leveraging totals and about several key assumptions. The major issues and discussion surrounding them are the subject of Chapter 3. The quantitative results are provided in Chapter 4.

3. Methodological Issues

In preparing information about the pilot study and communicating with CBBEP staff and partners, CMB tried to provide simple and clear guidance about which resources should be included as leveraging and which should not. This proved to be a challenging objective because of the variety of projects, funding, and partnering arrangements in place. This chapter begins with a list of the basic criteria agreed to as the pilot project got underway. Sections 3.2 and 3.3 explore a number of issues that arose with regard to counting leveraged resources, some examples, and how the issues were resolved for this exercise.

It is important to emphasize at the outset that there is no right or wrong way to resolve some of these issues. The primary goal was to remain consistent with the basic criteria (laid out in section 3.1), but also to address issues practically. Since CMB hopes to replicate this exercise in other NEPs, its intent was to:

- C Test the feasibility of the approach -- Did it work? Did it make sense to the participants?
- C Be consistent across projects and NEPs -- Could another researcher replicate the results following the approach? Would results from other case studies be comparable?
- C Recognize limits in the resources that would be devoted to obtaining data – Will additional time spent following leads make a significant difference in the final results?

The remainder of the chapter describes how CMB applied these principles in modifying and implementing the approach. A summary of the criteria is provided as Figure 3-1.

3.1 Basic Criteria for Including/Excluding Resources

To be included as leveraged resources, funding or in-kind support must either support CBBEP operating activities (e.g., staff) or support CCMP implementation. CBBEP staff contribute to the goals of the Bays Plan through their management of projects, outreach activities, coordination of meetings and resources, administrative efforts, planning, and general involvement in issues affecting the Bays. Including the operating budget of the CBBEP in the total captures all of these activities without having to attribute each staff members' time to specific projects or efforts. For our purposes, there would be little practical benefit of this level of detail.

At the same time, this guideline is intended to prevent against including salaries of other agency workers who may address some of the same issues as CBBEP, but are not on its staff or who are not working on projects in the Bays Plan. For example, including the salaries and overhead of state environmental agency personnel who write and review permits for wastewater discharge into the Bays area would not be appropriate; their efforts may help maintain water quality in the

Figure 3-1

What Was Counted: Three Criteria Had to be Met

| Criteria | Additional Discussion <i>[page reference]</i> |
|---|---|
| <p>1. Resources supporting NEP operations (staff, offices) or direct implementation of CCMP actions</p> <p style="text-align: center;"><i>AND</i></p> | <p>Include financial support as well as in-kind support</p> <p>C In-kind support included at market value: services valued at billing rates for appropriate individuals; government or non-profit staff valued at cost plus overhead; value of goods based on market prices; value of space or equipment based on market prices (<i>e.g.</i>, rent or lease prices) <i>[pp.18-19]</i></p> <p>C Volunteer contributions appropriate to include, but must be carefully tracked to avoid double-counting value included elsewhere; value of volunteers should be set based on market value for services provided <i>[pp.16, 19-20]</i></p> |
| | <p>Include resources that meet the criteria whether administered by the NEP or not <i>[p.10]</i></p> |
| | <p>Time and effort to document every contribution to a project would be excessive; need to focus efforts on major sources <i>[p.20]</i></p> |
| | <p>Recognize not all benefits of NEP involvement can be monetized (<i>e.g.</i>, credibility, trust, mediation) <i>[p.15]</i></p> |
| <p>2. NEP played key role in obtaining the resources</p> <p style="text-align: center;"><i>AND</i></p> | <p>Include resources for which NEP applied directly (grants, special funding) <i>[p.12]</i></p> |
| | <p>Include resources directed to CCMP implementation by NEP, even if funds not raised directly by NEP (<i>e.g.</i>, SEP funds channeled to CCMP tasks through NEP involvement) <i>[p.12]</i></p> |
| | <p>Include support to separate entities that NEP caused to come into existence (<i>e.g.</i>, a local land trust that received start-up funding from NEP) <i>[p.13]</i></p> |
| | <p>Include total value of partnering efforts where NEP funds were critical to the viability of the project (<i>e.g.</i>, used as matching funds). <i>[p.13]</i></p> |
| | <p>Exclude value of pre-existing, ongoing efforts by other agencies and entities that are independent of the CCMP (<i>e.g.</i>, exclude permitting and review activities of state regulators) <i>[pp.8, 10]</i></p> |
| <p>Exclude total value of ongoing programs to which NEP is only a minor supporter (<i>i.e.</i>, where the involvement of the NEP is not crucial to the viability of the program). Do include NEP's contribution to the effort, however. <i>[pp.13-15]</i></p> | |
| <p>3. Resources committed between September 1998 and August 2001 (3 fiscal years)</p> | <p>Resources committed during the period, rather than when funds are received or expended <i>[p.11]</i></p> |
| | <p>Exclude funds carried over from years before the study period; avoid double-counting of carry-over and unused funds <i>[p.11]</i></p> |
| | <p>Include full value of multi-year contributions in the year in which they are committed <i>[p.11]</i></p> |

Bays, but their efforts are not directly linked to implementing the CCMP. Agency staff time that is specifically assigned to work on CCMP projects was included as in-kind support.

With regard to projects, the focus was on those actions identified in the CCMP or the so-called Bays Plan. It is certainly possible to identify ongoing efforts in the Bays area that further the goals of the CCMP, but are not specifically identified in the plan. By excluding these from the analysis, our intent is to focus attention on those areas in which EPA funds have played a more direct role in implementing the CCMP. This is not to say that other programs operated by public, private, or non-profit entities do not provide a benefit to the Bays area, but simply that these programs are not counted in the analysis.

Projects and funding need not be administered by CBBEP to be included. The program is an active participant and financial supporter of projects that are implemented by others. The resources committed to these projects by the program were included. CMB also included the funding and in-kind support (if any) provided by the administering entity and other project partners *if CBBEP played a role in obtaining the funding* (see below). In cases where CBBEP simply provided support for a project that was going to happen anyway, CMB only counted the CBBEP contribution; if CBBEP's involvement made the project possible or provided critical matching funds for others, CMB counted more of the resources. These judgements were made on a project-specific basis and several examples are cited in section 3.2.2.

The CBBEP must have played a key role in obtaining the support. This criterion is more vague because judgement is required in deciding whether the program had an impact on obtaining the funding or the support. This criterion was the subject of the most discussion CMB had with CBBEP staff and partners as wrestled with whether or not to include some funding or project. For most of the projects and most of the funding provided to the CBBEP, applying this guideline was straightforward. Some of the specific issues that arose are discussed in section 3.2.2 below.

Resources should have been committed during the first three years of CCMP implementation (FY1999 through FY 2001). The period from September 1998 through August 2001 saw significant changes in the CBBEP. The program went through a reorganization at the beginning of the period as it left the aegis of the Texas Natural Resources Conservation Commission (TNRCC) and began operation as an independent entity. During this time, CBBEP began its implementation efforts. Further discussion of timing issue is in section 3.2.1.

In collecting and interpreting data, the CMB was responsible for implementing and enforcing these criteria. While some funding sources and projects clearly met the criteria for inclusion, there were many areas of uncertainty that required interpretation and decisions about whether or not to include resources and, if so, how much to include. These two topics are addressed next, in turn.

3.2 What Should be Included?

Beyond the general principles discussed above, CMB encountered many specific issues related to measuring leveraging. The detailed discussion of how CMB determined what should be included or excluded from the leveraging total is organized into three categories: timing (the interval in which support had to be committed), the role of CBBEP in obtaining support (the longest and most complex), and the contribution of volunteers.

3.2.1 Timing

As noted in Chapter 2, CMB's agreement with CBBEP stipulated the focus on the first three years of implementation. From a practical perspective, the program's reorganization slowed implementation in 1999 (these dates refer to the program's fiscal year, from September through August), shifting most of the funding to 2000 and 2001. Especially at the start of implementation, focusing on a single year would have been practically difficult and would have painted a skewed picture of the pace of activity.

The major decision on timing was to exclude funds carried forward into 1999 from prior years. Funds that had been committed to budgets in 1998, for example, but were not spent, were nonetheless already committed and were excluded from the analysis. An alternate approach would have been to restrict timing based on when funds were actually spent, but as discussed in section 3.3.1, this posed more measurement problems and did not seem to emphasize the efforts of the estuary program in obtaining funding, which is the focus of this exercise.

As a result, carry-forward funds were subtracted from the total resources included, if the carry-forward came from before 1999. Funds carried forward from 1999 or 2000 were counted, but care was taken to avoid double-counting of funds reprogrammed from prior years.

To be consistent, then, all funds committed for the 2001 program year were counted in the approach. If CMB were to repeat this analysis for fiscal year 2002 with CBBEP, CMB would limit the analysis to those funds committed in 2002, excluding any carry-forward from prior years. This consistency is important to enable the approach to be replicated by others, and to be consistent if CBBEP were to re-evaluate its leveraging in future years.

Another timing issue relates to multi-year contributions such as a fund to maintain donated lands over a certain period of time. In considering these funds, CMB decided to include the entire amount of the contribution, rather than annualizing over the three-year period of the study. The rationale is consistent with that provided above: that the funds were committed during this three-year window and these same funds, though they may be spent years from now, would not be included in a future study, since they had been committed at an earlier time. In short, CMB employed an accrual-based accounting approach in the analysis, rather than a cash-based approach. Accruals booked during the three-year period were included.

3.2.2 Role of CBBEP in Obtaining the Funding or Support

As noted, this criterion required the most judgement and was therefore the most subjective one included in the approach. CMB has provided several categories of examples to illustrate how it interpreted the requirement that CBBEP “play some role” in obtaining the support. In addition to showing cases where the estuary program leveraged its resources to generate additional support, the examples also describe instances where CBBEP is simply a participant in an ongoing project and no leveraging is involved. This is a critical issue in evaluating the role of the program in a project and one that was assessed in all the interviews conducted.

3.2.2.1 Play a Direct Role in Obtaining Funds

CBBEP staff sought out and obtained financial support for several CCMP projects. A clear example of this is the Colonial Waterbird Project (CWP) which is a multi-year effort to manage and enhance rookery islands for waterbirds. Ongoing efforts by the Texas Audubon Society were expanded and began to be managed by CBBEP staff in 2000, supported by funding from TNRCC. CBBEP prepared grant applications to EPA’s Gulf of Mexico Program and the US Fish and Wildlife Service and was awarded \$120,000 from those programs, thus enabling the project to expand to two CBBEP staff persons and to free-up TNRCC funds for other efforts. In addition to the support from these two grants, the CWP receives nearly \$20,000 of in-kind support and substantial assistance from volunteers.

Much of CBBEP’s operating budget and many individual projects are funded through a line item in the state’s budget for TNRCC. The line item for estuary program support is split between the CBBEP and the Galveston Bay Program. CBBEP staff worked with project partners and others to help gain passage of this measure. Therefore, state budget funds for CBBEP were included as leveraging.

3.2.2.2 Find Uses for Funds Available to Support the Bays Plan

The Bays areas will benefit significantly from Supplemental Environmental Project (SEP) funds that are to be used for habitat acquisition, restoration, and management. These funds, provided as part of legal settlements with environmental violators, will be administered jointly by CBBEP in support of the CCMP. While one cannot claim that CBBEP was in any way responsible for raising the money, as in the grant and appropriation examples above, it is clear that the program was responsible for directing the funds to critical areas of need within the Bays area. CBBEP was prepared with plans for using these funds once the extent and purpose of the funds became known. If the program had not stepped forward, the funds might have been spent differently and the program would not have been able to use these funds to leverage additional resources as noted below. For both these reasons, CMB felt justified in including these SEP funds along with those that CBBEP played a direct role in obtaining.

3.2.2.3 Enable Additional Resources to Flow into the Bays Program

Two additional examples illustrate how the involvement of the Bays Program and its funding can encourage or enable others to support a project. In most cases, these examples illustrate how CCMP programs with targeted support from CBBEP have grown well beyond what they could have without the efforts and resources of CBBEP.

The first example is the work of the Coastal Bend Land Trust (CBLT). A land trust is a non-profit organization established to coordinate the acquisition of land or property rights in order to provide some broader benefit beyond simply land ownership. In the case of environmental protection, land trusts are often used to protect particularly sensitive parcels, or to provide a buffer around environmentally important areas. The establishment of a land trust in the Bays area had been a long-time goal of the Coastal Bend Bays Foundation (CBBF), a membership organization that pre-dated the establishment of the CBBEP. During this period, CBBEP provided the newly-formed land trust with resources to develop its business and financial plans and to promote itself. Direct funding from CBBEP also supported establishment of a staff position at the trust and expenses for the operation of the trust. Now that the CBLT is operating, it has obtained over \$365,000 worth of contributed property in Aransas, Nueces, and San Patricio counties. These gifts, combined with SEP funding for land acquisition, have leveraged CBBEP's initial investment significantly, and the trust is still a very young organization. Overall, EPA 320 funds provided \$37,500 of support which leveraged an additional \$630,000 in resources and contributions for the CBLT.

CBBEP played a critical role in bringing together several partners in a significant acquisition project to protect habitat bordering Nueces Bay and Corpus Christi Bay. Working in conjunction with The Nature Conservancy, the project combined \$1,000,000 in SEP funds with a substantial land contribution from a private individual to The Conservancy, and over \$400,000 in funds and in-kind support from The Conservancy. These resources together provided matching funds to support a grant authorized by the North American Wetland Conservation Act (NAWCA, administered by the US Fish and Wildlife Service) of an additional \$1,000,000. CBBEP's participation in directing the SEP funds to the effort, cooperating with TNC, and preparing the NAWCA grant application generated significant resources for habitat acquisition and protection, far beyond what any individual participant could have accomplished.

3.2.2.4 Where CBBEP Does Not Get Credit for Additional Resources

In many cases, the program is supporting projects that may pre-date it or that solicit many organizations including CBBEP for support. In these instances, CMB did not credit the CBBEP for having a role in obtaining the resources that support the entire project. In other words, participation by the estuary program in a project does not mean that the value of the entire project is counted as leveraging.

The question CMB asked project managers and project partners was, “Would this project have happened without the estuary program’s involvement?” This got respondents to think about the role that CBBEP played in the project and its funding and helped examine critically whether any leveraging should be counted or not. A number of examples are described above where CBBEP was largely responsible for bringing the project about or generating additional support. The next examples illustrate cases where the program is supporting discrete portions of larger programs which are not counted as leveraging; in these cases, CMB simply counted the dollar value of CBBEP’s support for the project, rather than the entire project budget.

The City of Ingleside and the San Patricio County Drainage District are in the midst of a project to manage flooding and drainage issues near Lake Whitney and McCampbell Slough. CBBEP became involved in the project in order to promote consideration of the impact of the flood control project on wildlife habitat. CBBEP provided resources to support the development and implementation of a watershed management plan that could include measures to protect wildlife habitat. The ultimate implementation of the plan will be up to the local governments as they consider future drainage system improvements. This project is truly an add-on to an existing effort, but CBBEP’s involvement expanded the project to consider some additional concerns. The total resources attributed to the estuary program from this project amounted only to the funds provided by CBBEP, not to the entire value of the drainage improvement project. If, in the future, additional resources are obtained to implement elements of the watershed management plan, it would be appropriate to include those additional resources as leveraging, since CBBEP would have laid the groundwork for obtaining those resources.

Another similar example is provided by one of many outreach programs supported by CBBEP resources and staff. The Corpus Christi campus of Texas A&M University (TAMU-CC) offers a graduate level course for in-service teachers on teaching environmental science. Because of funds received from CBBEP, the University is able to offer two sections of the course: one for elementary and one for secondary school teachers. Only one section of the course could have been supported without CBBEP’s involvement. The funds provide tuition assistance and accommodations for the teachers and subsidize the faculty costs; TAMU-CC provides additional support in the form of classroom space, faculty time, and transportation. As with the example above, CMB only included the value of CBBEP’s contribution in the leveraging totals, not the value of the entire program, since CBBEP is really providing supplemental support, rather than having a key role in the existence and offering of the course.

CBBEP has provided support to a project to improve a nature area and park in the City of Aransas Pass. The area, originally used as a dump, has been cleaned up and improved to enhance wetland habitat and to provide educational and viewing opportunities for the public. CBBEP’s involvement has been to provide seed money for the project by supporting cleanup efforts, improving water exchange, and improving public access. Now that the large park area is the subject of improvements, additional developments have changed the scope of the project. A large, new marine fabrication yard is being built in the city which, as a result of permit conditions, means that about eight acres of wetland mitigation is required. Plans are being

developed to enhance and expand the existing nature park even further, using funds provided by the developer of the commercial facility. In this case, CBBEP did provide seed money for the work at the park and helped obtain additional funds from federal sources. But, CBBEP did not have anything to do with the siting of the marine facility or the permit requirements for mitigation. CMB was reticent to include as leveraging funds spent because of permit requirements for a construction project, especially since the spending is to mitigate adverse impacts on habitat in another location. As a result, CMB did not include the broadened scope of this project in measuring its total value for leveraging purposes.

One final example shows how CMB calculated the value of CBBEP's involvement in a major ongoing project; it also illustrates the difficulty of quantifying other benefits that the estuary program brings to projects with which it is involved. The Port of Corpus Christi is one of the largest petrochemical and petroleum ports in the US. Maintaining and enhancing the Port is of vital economic interest to the area. One of the port-related topics that emerged from the CCMP was to develop a dredged material management plan for the Coastal Bend and to identify beneficial uses for dredged material from the ship channel and intra coastal waterway. CBBEP provided the funds to support the work of the Beneficial Uses Group and to prepare a plan to guide project participants and neighboring communities in the design and implementation of beneficial use projects. The Port of Corpus Christi Authority of Nueces County, Texas (the Port Authority) had the lead for plan development and contributed significant in-kind resources to supplement the initial funding provided by CBBEP. The actual dredging project itself will be an enormous undertaking, dwarfing the several hundred thousand dollars of direct and in-kind support for the beneficial uses plan which CMB included in the leveraging totals. Yet, given the criteria, it would not be appropriate to count the value of the entire dredging project. In the future, as communities and other participants in the dredging project implement beneficial use plans for dredged material, it may be appropriate to count those future funding commitments as leveraging, since CBBEP funds and effort were expended to lay the groundwork for beneficial uses.

The dredging project also highlights an additional area of benefits provided by CBBEP, but one that is extremely difficult to quantify: the intangible value of CBBEP participation and endorsement of a project. Because the estuary program has significant credibility and visibility in issues involving the Bays, CBBEP's involvement in a contentious issue like channel dredging brings opposing sides together in a unique way. One individual interviewed observed that if not for the involvement of CBBEP in discussions about the dredging project and its impact, the project might have never gotten off the ground. The exact nature of the benefit appears to be the credibility conveyed by CBBEP's involvement, the ability of CBBEP to raise and integrate public concerns into the process, and trust that advocates for the environment and for the port will be able to balance their concerns as the project moves closer to reality. As noted before, CMB could hardly include the entire value of the dredging project in the leveraging total, but should emphasize the intangible benefit created by CBBEP's involvement in the project's design and formulation.

3.2.3 Volunteer Efforts

The formation and operation of a National Estuary Program would not be possible without the contribution of thousands of volunteer hours. CBBEP is no different in that members of the various committees that guide the work of the program contribute significantly to its success. In a similar fashion, many of the projects underway depend on the efforts of volunteers to staff events or assist in maintenance or monitoring.

Volunteer efforts are a form of in-kind support and should be included in total resources committed to the NEP. However, as addressed in section 3.3.4, there are pitfalls in measuring the amount of volunteer effort and valuing the time. In fact, because of a lack of reliable data on which to base estimates, CMB did not include volunteer contributions in the leveraging estimates for CBBEP, but did discuss issues about what would and would not be appropriate to include if the data were available.

An example of volunteer efforts that could be included comes from projects in which citizen volunteers provide services that would otherwise have to be contracted out. Examples include planting seagrass and cleaning up beaches. If a task were part of the project's scope, the value of the volunteers performing the task should be included, subject to several conditions. First, NEPs must avoid double-counting the time of volunteers whose involvement with the project may be funded separately. If, for example, a state agency staff person were funded by the NEP, including his or her time would be double-counting. Second, volunteer services must be provided by volunteers qualified in the skill or profession of the specific work they perform. Time spent by unskilled volunteers in committee or team meetings cannot be used as in-kind match under EPA guidance and therefore would not be counted.

NEPs typically have a range of standing committees that provide direction and advice from different constituencies. These may include a policy committee, management committee, scientific and technical advisory committee, and a citizens advisory committee. Some of the individuals serving on these committees are NEP staff, participating as part of their job function. Since their salaries, benefits, and overhead are already measured in the operating budget of the program, no additional value should be included for them. Other participants may be employees of project partners or government entities, also appearing in a professional capacity on behalf of their employers. As long as these staff are not paid by the NEP or being counted as match toward another federal grant, EPA guidance permits including their time as an in-kind contribution.

3.3 Issues Related to Measurement

Once CMB moved beyond the issue of whether or not to include certain resources as leveraging, a number of issues remained about how to quantify the value of the support. The major issues and the approaches are listed below.

3.3.1 Revenue vs. Expense

CMB wanted to identify a consistent way to measure program support that would be indicative of CBBEP's leveraging efforts, be readily obtainable, and be reliable. The ultimate approach was to focus on the value of revenue commitments to the program and to various projects. As discussed in section 3.2.1, CMB measured the dollar value of funds or other support committed during the three-year horizon for the analysis.

This approach is consistent with the way in which Section 320 funds are made available to the program. Funds are committed for a certain period and are available for use once the period begins. Commitments made during the three years correspond to Section 320 funds made available to the program for its fiscal years 1999 through 2001.

An alternative would have been to measure funds when they were actually spent, but this introduces a number of uncertainties and complexities that render that approach unworkable. First, the funds may be administered by an entity other than CBBEP, so tracking actual expenditure dates would require extra effort. It is also unclear as to when the funds would be "spent," it could be when they are requested by a project partner, or when they are actually disbursed to a contractor. Further, significant delays in spending can result from factors completely outside the control of CBBEP. To focus attention on CBBEP's success in leveraging funds, CMB selected the time when the program obtained commitments for funding, rather than the time at which the funds were ultimately spent.

3.3.2 Movement of Funds

An issue related to timing and funding commitments is the fluidity of funding across projects over time. With more than 50 projects underway, the CBBEP pilot project illustrates how changes in priorities can result in re-programming of funds over time. Projects may not have started on time or were perhaps cancelled before implementation, requiring funds to be transferred between periods or among projects. Another issue is that the projects are at different stages of completion, so CMB had very preliminary figures to work with for newly devised projects, whereas other projects may be complete and the funds are already disbursed.

The greatest methodological concerns are for double-counting of resources or including resources committed outside the time period for the pilot project. Many of the funds committed to projects in the 1999 fiscal year were ultimately carried forward to 2000 and even to 2001, for example. Good financial recordkeeping on the part of CBBEP made it possible to identify these carry-forwards and to enable CMB to avoid double-counting when funds originally committed in 1999 were re-programmed to support a project in the 2001 work plan. The database was set up to track the year in which funds were committed to help avoid double-counting. The other benefit of CBBEP's recordkeeping was to enable CMB to exclude funds committed prior to 1999. CMB did not have to make any decisions about how to address fund movements among projects, only to follow the guidelines established about which years to include in the analysis.

This issue simply illustrates the importance of tracking funding sources carefully to facilitate a reliable measure of leveraging.

3.3.3 Valuing In-kind Contributions

Much of the support for project and operations is “in-kind.” This support comes not in the form of dollars to pay for services or materials, but as the actual provision of those services or delivery of materials by project partners. Rather than contributing funds, these partners provide a good or service which can be factored into the overall value of the project. Because most of these contributions can be valued (*i.e.*, they are bought and sold in the free market), they can be assigned a value. CMB has provided a number of examples of the types of in-kind support included in the leveraging totals and how the contributions were valued.

3.3.3.1 Services

Several projects involve partners from Texas universities, especially TAMU-CC. Faculty may support projects by providing design or consulting services without compensation or directing the work of graduate students, who receive stipends from the University, but not funding from the project. These contributions were generally valued based on discussions with the faculty member to determine the extent of time and the value of the services provided. Since many of these individuals bill clients for these same services, the rate at which to value the contributions is already established. In some cases, CMB was able to derive very precise estimates, while in others the margin of error was greater.

In addition to university contributions, CMB also included services provided by staff at cities and counties, other government agencies, and non-profits. For example, the Port Authority underwrote a substantial portion of the cost of the beneficial uses plan for dredged material that was discussed earlier. Working with an engineer at the Port Authority who led the project, CMB computed a value for the in-kind contribution of services based on the estimated cost of obtaining the same type of report from an outside consultant.

3.3.3.2 Time and Materials

Work crews and agencies from cities and counties in the Bays area have contributed or committed resources in the form of fill, site work, and disposal of debris for projects involving site reclamation or improvement. These services were valued by the CBBEP project managers or city officials based on the cost of obtaining the materials and the value of the services if provided by an outside source. For example, the Texas Parks and Wildlife Division printed and installed signs to direct boaters away from sensitive habitat. USDA has also contributed plants for restored areas from its Plant and Materials Center.

3.3.3.3 *Use of Equipment/Facilities*

Several projects benefit by the use of equipment owned by project partners or supporters. For example, EPA and other agencies have contributed use of laboratory or other analytical equipment to support projects in the Bays Plan. Projects involving sampling or monitoring of wildlife use boats, trailers, vans, and sampling equipment provided by non-profits like the Texas Audubon Society and TAMU-CC. Because this equipment is shared with others, it was somewhat uncertain apportioning its value to individual projects. In the interviews, CMB asked project managers or partners to at least estimate the cost of obtaining these resources from other sources (*e.g.*, to rent boats on a daily or weekly basis) and used this information to compute totals. In all cases, the estimates used were provided by the project partners.

3.3.3.4 *Office Space*

Both the estuary program and some of the programs it supports operate out of donated office space. CBBEP is located at the Port Authority; the value of the space provided has been computed by the program and its auditors based on the area and market value per square foot. A build-out of the new space was funded by the Port Authority as well and the amortized value of the build-out was included for the appropriate period corresponding to the study interval. Office space for the Coastal Bend Land Trust was valued using a similar approach, with the space being donated by a local realty firm.

3.3.3.5 *Other Support*

Several outreach projects involve unique forms of in-kind support. A multi-cultural exchange program generated contributions of transportation, hotel rooms, and meals from local businesses. The most recent Earth Day/Bay Day had in-kind contributions in the form of publicity, printing, production of public service announcements, donated water and soft drinks, and many more goods and services. These contributions were all valued by the program's executive director based on the market value for the services and goods provided.

3.3.4 *Valuing Volunteer Contributions*

As noted earlier, selected volunteer contributions are appropriately included in the leveraging total, but valuing these contributions poses unique challenges. The first issue relates to how to record the time commitment and the second relates to valuation of the time.

For projects with a significant volunteer component it is important to implement a recordkeeping system to maintain reliable data. This system may also be useful as a management tool (*i.e.*, for tracking the overall use and cost-effectiveness of the volunteers) as well as providing the necessary input data for measuring the value of the volunteer contribution. For NEPs that rely heavily on volunteers (*e.g.*, use volunteer contributions as part of their match), a system for recordkeeping is beneficial and required under EPA's guidance. Managers should be sure to

avoid double-counting in recording volunteer contributions, by excluding individuals whose participation may be supported by other funding provided to the program (e.g., employees of project partners).

The more difficult measurement task is assigning a value to the hours worked. The appropriate basis for valuing time is the market value for the service provided. This could be measured by the cost of having a vendor provide the service (e.g., the fees that would be paid to accomplish the same task) or by the full costs of hiring an individual to do the job; the full costs would include wage costs, fringe benefits, and overhead (such as additional office space) if relevant. Matching the services provided to specific quotes from outside vendors or to wages of employees already in the organization provides confirmation that the estimates are realistic. It is also important to value the service being provided, not the individual volunteering. If a surgeon volunteers to plant seagrass, his value should not be based on his earnings per hour as a surgeon.

Guidelines for valuing volunteer labor do exist from various government agencies, especially those that issue grants. A common source for an average value is Independent Sector, a coalition of non-profit organizations that publishes an annual average volunteer value. The value for 2001 was \$16.05 per hour which includes fringe benefits (www.independentsector.org).

As a final note, CMB included in the leveraging totals for this project in-kind contributions in the form of time contributed by various project partners (e.g., hours of faculty time from a university, hours of staff time from a city employee). These efforts could be readily quantified, both in terms of hours (generally included in project budgets) and value (billing rates or pay rates including benefits). Other volunteer contributions could not be included in the leveraging totals for CBBEP because adequate records did not exist to produce reliable estimates.

3.3.5 Project Details: How Far to Go

Some of the projects underway in the Bays area are quite complex with regard to the number and type of project participants. The approach to each project was to discuss the general nature of the work with the project manager and obtain contact information for the key project partners. Through the discussions with these individuals, CMB hoped to quantify most of the resources committed to the project. In some cases, there were additional avenues that could have been followed to track down some additional piece of information or to quantify one more category of support. CMB relied on its judgement and that of the project managers in determining when most of the support had been captured and diminishing returns were setting in. Our concern was not only for the cost of consultant time to track down the information, but also the burden placed on the program participants. CMB was very conscious of minimizing the time required of the CBBEP staff and project partners in obtaining the information for the pilot project.

4. Results

4.1 Totals and Leveraging Achieved by CBBEP

During the three years from September 1998 through August 2001, CBBEP received \$1.13 million in EPA Section 320 funds. Through a combination of appropriations, grants, and in-kind contributions, CBBEP raised an additional \$8.88 million; this results in a leveraging ratio of \$7.87 raised for every \$1 of EPA support (Figure 4-1).³ The combined total of Section 320 funds and leveraged resources equals more than \$10.01 million in resources devoted to implementing the Bays Plan in 1999, 2000, and 2001.

The rate of leveraging increased dramatically from 1999 to 2001. The movement of funds across years in the study period complicated our efforts to compute a precise rate by year, but estimates are provided in Figure 4-2. The leveraging ratio rose from less than 1:1 in 1999 to nearly 20:1 in 2001. Examining leveraging over a three-year period, instead of just one year, allowed CMB to identify this trend.

4.2 Funding Details

4.2.1 Administration vs. Project Support

Based on CBBEP's operating budgets for the three years, a total of \$1,622,000 was devoted to salaries, benefits, rent, facilities' costs, travel, supplies, and other operating costs.⁴ Of the total, \$313,000 or 19% came from EPA Section 320 funds for a leveraging ratio of 4.18:1 for the period (Figure 4-3). Focusing only on the last two years of the period, out of CBBEP's \$1,164,000 operating budget, only \$25,000 was supported by EPA, for a leveraging ratio over 45:1. This illustrates CBBEP's success at shifting EPA funds to support projects directly, rather than using these funds to support administration and salaries.

Most of the Program's administrative support (62%) comes from the state appropriation through TNRCC. The remaining 19% of the operating budget came from local interests including the City of Corpus Christi, San Patricio and Nueces Counties, the Port Authority, and the Port Industries of Corpus Christi (a trade association); these local sources provided about the same level of support for operating costs that EPA did during the period.

³In the report, the leveraging ratio is computed as the ratio between the leveraged dollars and EPA Section 320 funds received. If CBBEP received \$10,000 from EPA and raised \$90,000 from additional sources, the leveraging ratio would be 9:1.

⁴Note that the distinction between administration or operating budgets and project budgets is somewhat blurred because much of the salaries and overhead for project managers ultimately support project efforts.

Figure 4-1

Leveraging Success of CBBEP: 1999-2001

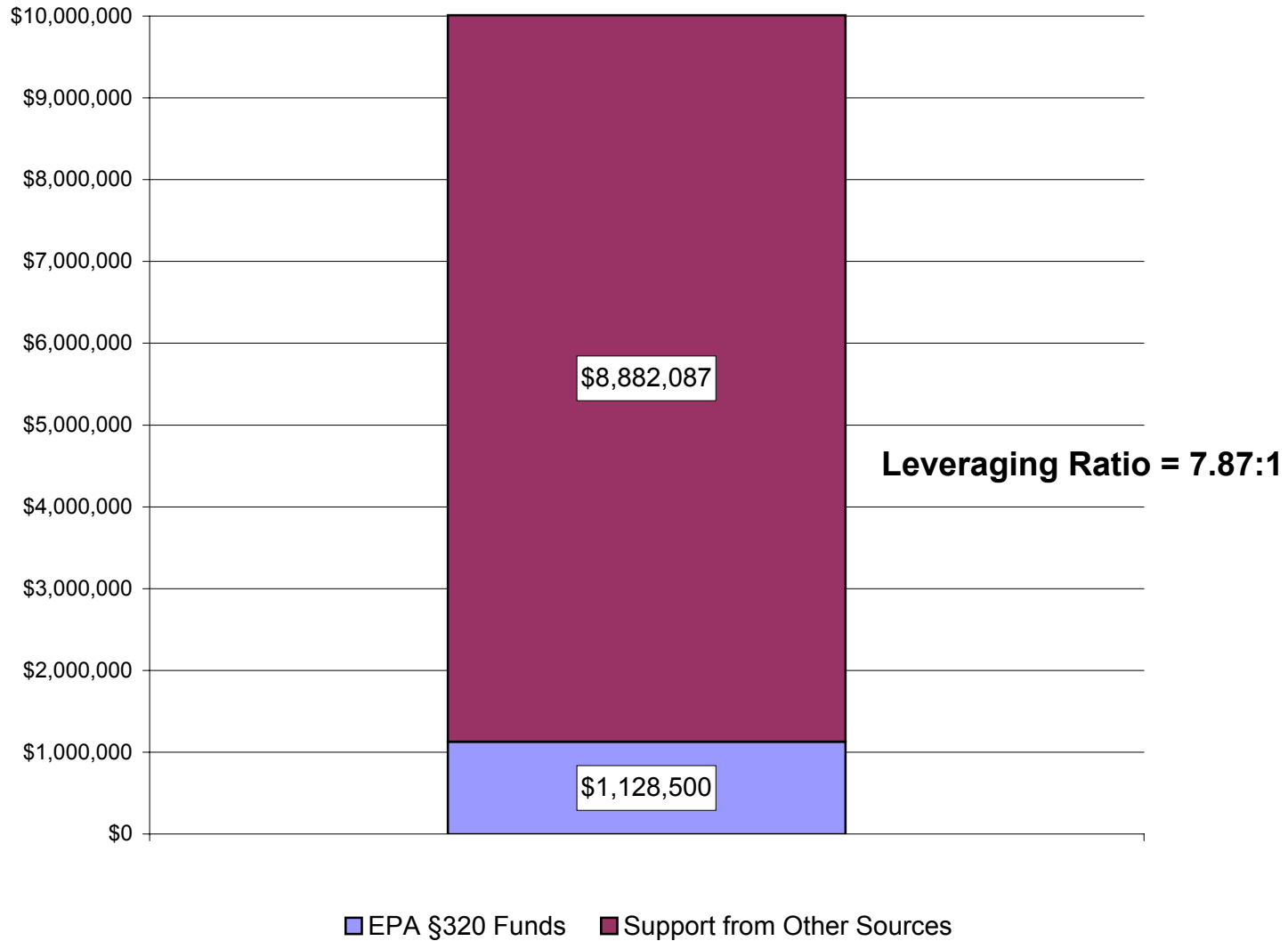


Figure 4-2

Growth of Leveraging by CBBEP: 1999-2001

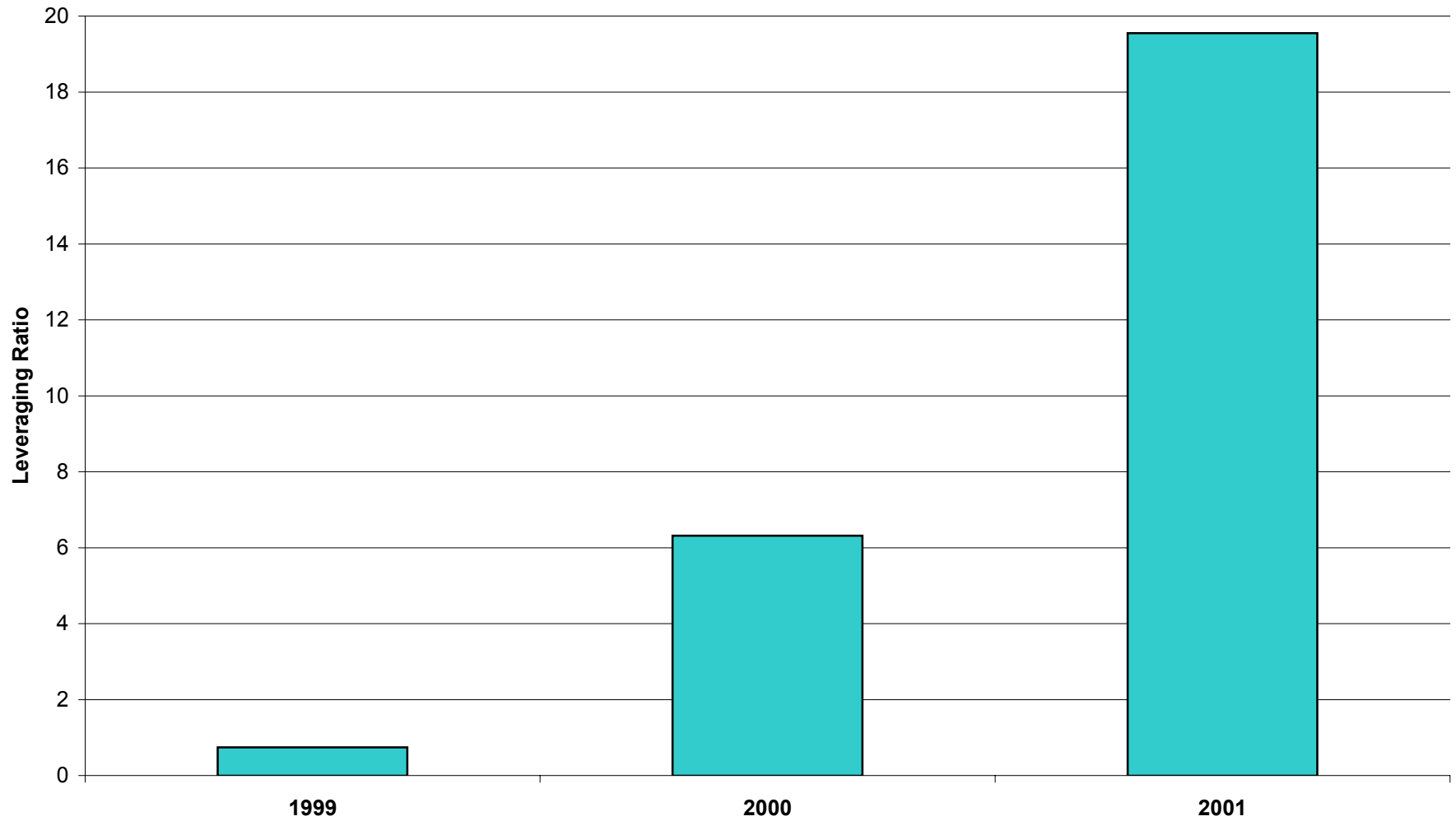
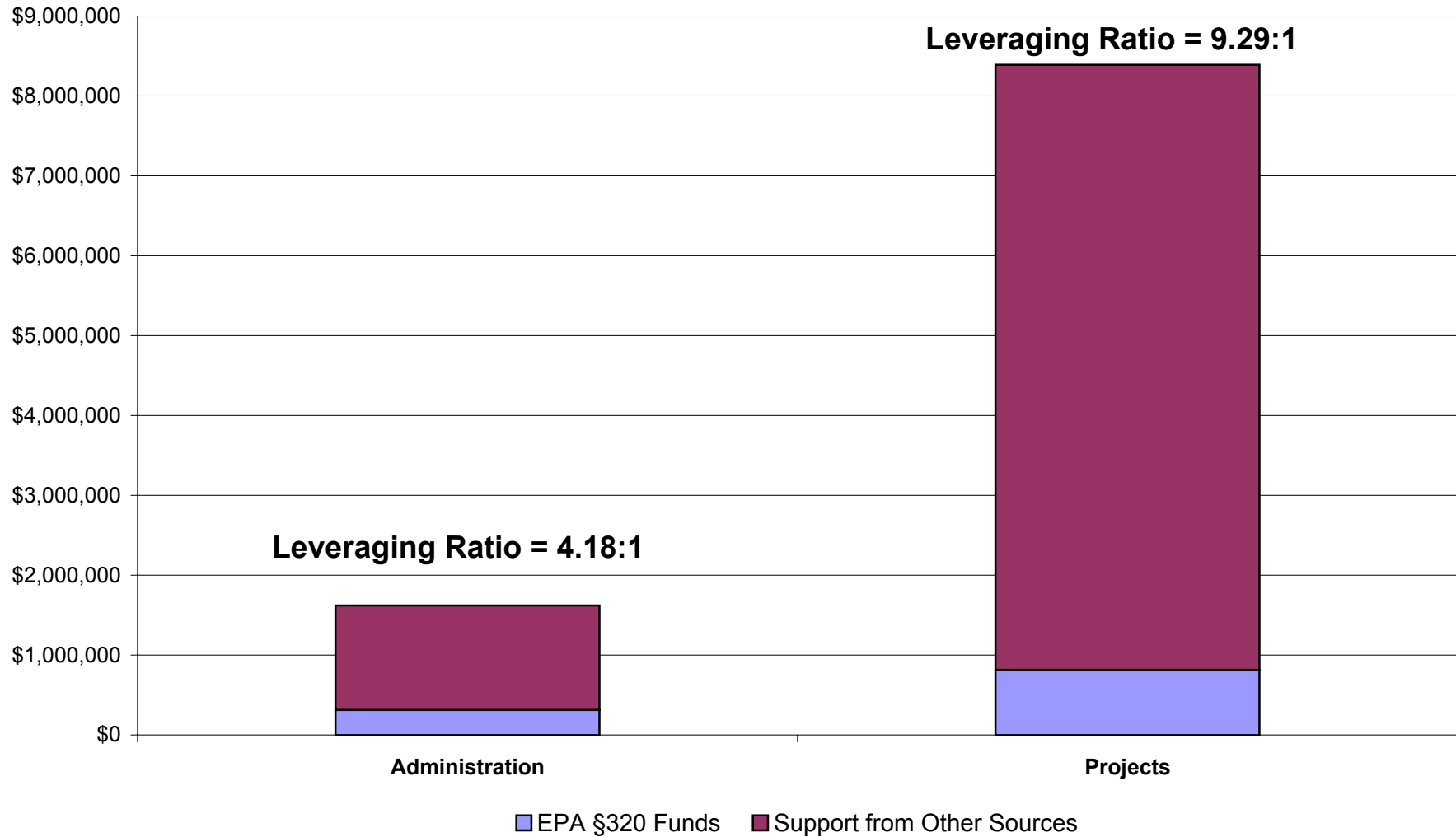


Figure 4-3

Leveraging of Administrative and Project Funds by CBBEP: 1999-2001



Turning to direct project support, \$8,389,000 of new funds were committed to projects during the three-year study period. Of this total, \$815,000 was EPA Section 320 funds, so the program raised \$9.29 for each dollar provided by EPA (Figure 4-3). The amount of outside funds committed to projects increased significantly each year of the study period, culminating with several large commitments in 2001 from SEP funds and federal and state grants totaling more than \$3.5 million. Further analysis of funding sources is provided below.

4.2.2 Analysis of Funding Sources

Funds for CBBEP operation and CCMP implementation have come from dozens of sources over the past three years. CMB identified about 40 separate entities that have supported the program, although this does not include the numerous corporate and individual contributions to special events and activities. For reporting purposes, CMB classified the funding sources and aggregated the contributions from each as shown in Figures 4-4 and 4-5.

4.2.2.1 Government Funding Sources

Government sources accounted for 71% of the financial and in-kind support received by CBBEP over the past three years. The largest supporter is the State of Texas which alone accounted for 34% of the \$10 million committed to the estuary program. Texas' funds come primarily from general revenues, appropriated through the Texas Estuaries Act to support the work of CBBEP and the Galveston Bay Estuary Program. The largest single state grant of over \$1 million came from the Texas General Land Office (TGLO) which administers the Coastal Erosion Planning and Response Act or CEPRA. The Program also received financial and in-kind support from the Texas Agricultural Extension Service, Texas Parks and Wildlife, and the Texas Department of Transportation. Also included in the Texas totals are contributions from several different programs at Texas A&M University. The Center for Coastal Studies at TAMU-CC is the largest supporter within the university system, but other programs have been involved as well. Most of the TAMU support has been in the form of in-kind contributions, while that from TNRCC and TGLO is primarily financial support.

The federal government is the next largest supporter after the State of Texas, accounting for 27%. Federal support has been evenly split between EPA and other federal agencies over the past three years. Focusing first on EPA, the Section 320 funding accounts for the largest category of support at 11.3% of total funding commitments. Grants from the Gulf of Mexico Program and in-kind support from the Office of Research and Development account for the remaining large sources within EPA.

Outside of EPA, CBBEP has tapped resources at several other federal agencies. The largest is a \$1 million grant from the US Fish and Wildlife Service which administers the North American Wetlands Conservation Fund. CBBEP has also received funding from the Coastal Management Program and the Coastal Zone Act administered by NOAA and assistance from the US

Figure 4-4

Sources of Financial and In-Kind Support for CBBEP: 1999-2001

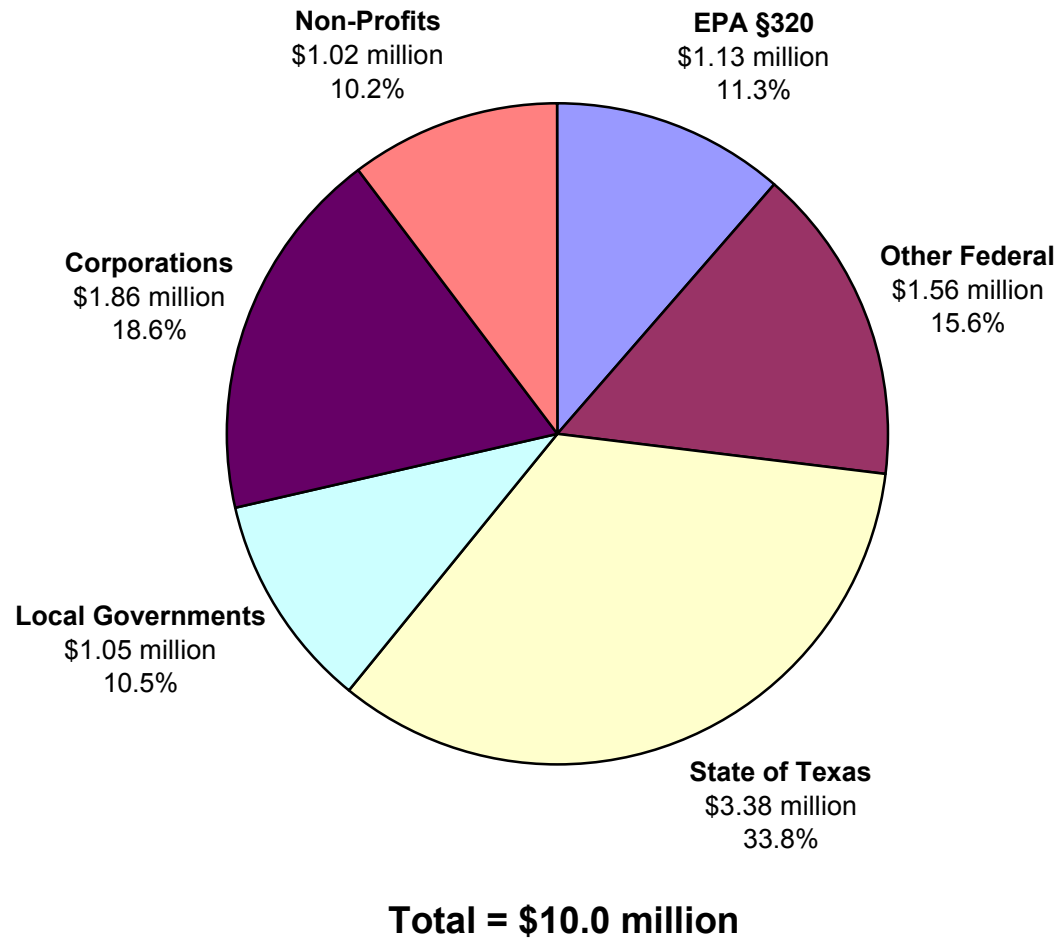


Figure 4-5

List of Funding Sources for CBBEP: 1999-2001

| Sources | Share of Financial and In- kind Support |
|---|--|
| Federal | 26.9% |
| EPA Section 320 | 11.3% |
| EPA GOMP, ORD | <u>2.1%</u> |
| Subtotal EPA | 13.4% |
| NOAA (CMP, CZA) | 3.1% |
| USFWS (NAWCA) | 10.3% |
| USDA | <u>0.1%</u> |
| Subtotal Other Federal | 13.5% |
| State | 33.8% |
| TNRCC | 20.4% |
| TGLO/CEPRA | 10.5% |
| TX Parks and Wildlife, Ag.Extension, Dept.of Transportation | 1.0% |
| Texas A&M University | 1.9% |
| Local | 5.3% |
| Cities (Aransas Pass, Corpus Christi, Port Aransas, Portland) | |
| Counties (Nueces, San Patricio) | |
| Quasi-Governmental (Port Authority of Corpus Christi) | 5.3% |
| Corporations | 18.6% |
| Non-Profits | 8.0% |
| Coastal Bend Bays Foundation | |
| Ducks Unlimited | |
| Kenedy Foundation | |
| National Fish and Wildlife Foundation | |
| Owsley Foundation | |
| Port Industries of Corpus Christi | |
| Texas Audubon Society | |
| The Nature Conservancy | |
| Welder Wildlife Foundation | |
| Other | |
| Individuals | 2.2% |
| Total | 100.0% |

Department of Agriculture. Over 95% of the federal support is in the form of financial assistance, with a small balance of in-kind.

Local governmental agencies in the Coastal Bend have provided financial as well as significant in-kind support for CBBEP, totaling about 11% of the total over the last three years. The City of Corpus Christi, Nueces County, San Patricio County, and the Port Authority provide regular financial support for projects and operations. The in-kind support from local agencies was larger than its financial backing for the program. In fact, these local interests were the largest single source of in-kind support for the program. In-kind contributions are principally in the form of donated time and materials for projects, where a local public works or similar agency helps implement a project. The Port Authority has provided its substantial in-kind support by contributing office space for the program and by underwriting the office space build-out for the program in 1999.

4.2.2.2 Private Funding Sources

Corporations, non-profits, foundations, and individuals made up the remaining 29% of financial and in-kind support for CBBEP during the study period. Corporate sources dominated the total, accounting for 19% of all support received during the period. The largest component of this contribution was \$1.5 million in SEP funds from Koch Refining, which has a large presence in the area. Koch was also the source of a sizable in-kind contribution of land to the Coastal Bend Land Trust. Additional corporate support was primarily smaller cash gifts or donated services or products to support outreach and education projects in the Bays area.

For reporting purposes, CMB combined the support from foundations and other not-for-profit entities. These groups accounted for 8% of support received during the three year period, with virtually all of the support dedicated to projects, rather than any operating support. About two-thirds of the support from these sources was financial. The largest contributors were The Nature Conservancy, which provided both financial and in-kind support, Port Industries of Corpus Christi (a local trade association), and Ducks Unlimited. The next largest supporters were three foundations: Welder Wildlife Foundation and National Fish and Wildlife Foundation which provided grants and the Kenedy Foundation which committed to donate property for wetlands protection.

The final 2% of support came as in-kind contributions of property from individuals or families. The largest of these gifts created the Cohn Preserve on Mustang Island in Corpus Christi Bay. Additional gifts have been made to the Coastal Bend Land Trust.

4.2.3 Administration of Funds

Another component of the analysis was to examine the entity responsible for administering funds and other contributions. CMB identified 26 separate entities managing projects and funds supporting the implementation of the Bays Plan. In addition to CBBEP, there are nine locals

governments or authorities administering projects, eight university programs or departments, four state agencies, and four non-profits.

The various university programs at TAMU administer about one-third of the 47 active projects and another third are overseen by city or county governments or local authorities. The remaining projects are run by CBBEP, state agencies, and non-profits.

Finally, CMB computed the dollar value of projects administered by the various parties involved. In some cases, the responsibility is shared, so in those cases CMB simply split the project budget among the cooperating entities. Figure 4-6 indicates that CBBEP administers nearly one-third of the resources, either by itself or jointly. The \$3.2 million includes project funds and the program's operating budget. Local government agencies administer about \$2 million (20%), with the largest role played by the City of Corpus Christi, the Nueces River Authority, and the Port Authority. Non-profits oversee \$2.1 million (21%), principally under the auspices of The Nature Conservancy, the Coastal Bend Land Trust, and the Texas State Aquarium. State agencies administer 18% of the funds, dominated by TGLO. Finally, the many Texas A&M programs and departments involved with the Bays Plan oversee the remaining 9%.

4.3 Comparisons

As this is a pilot study, there is no reliable basis for comparing leveraging in the Coastal Bend Bays & Estuaries Program with other NEPs. While comparing NEPs is not a primary goal of this project, a comparison with other similar research would indicate whether the findings are generally consistent with those of other investigators.

4.3.1 CCMP Implementation Review

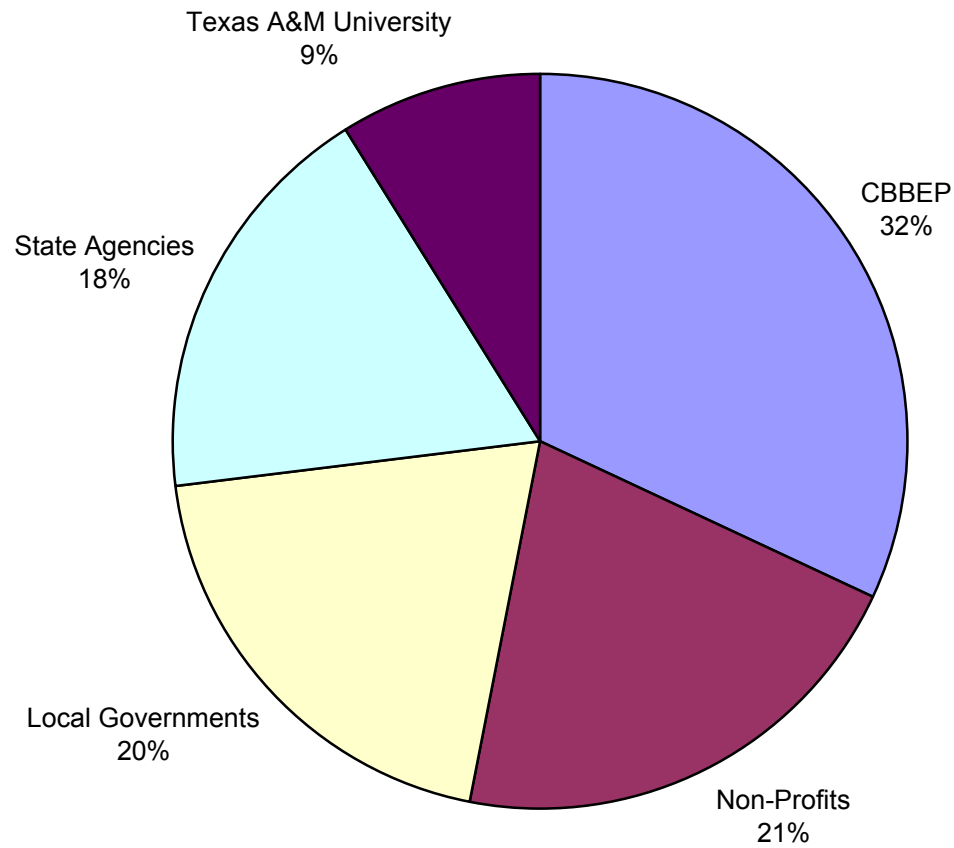
The first source of comparison is with the 2001 CCMP Implementation Review, recently prepared for EPA by CBBEP. The scope of the review, as dictated by EPA guidelines, extends far beyond the examination of leveraging described in this report. The report does compute a leveraging estimate, however, based on the same first three years of implementation activities. The Implementation Review identifies \$10,129,000 of resources allocated for CCMP projects and program operation; from an estimated base of \$984,000 of EPA Section 320 funds, the leveraging ratio computed is 9.3:1.

As noted previously in this chapter, CMB identified a total of \$10,011,000 of resources committed during the three year period. The discrepancy between the figures results from several methodological differences:

- C The leveraging study excludes funds carried forward into the study period from pre-1999
- C The leveraging study includes in-kind contributions from project partners not reflected in the budget estimates used in the Implementation Review

Figure 4-6

Who Administered Bays Plan Resources: 1999-2001?



C Interviews conducted for the leveraging study resulted in revisions to some budgeted figures originally proposed with various projects

As the purpose of the Implementation Review was to document progress across all dimensions of the implementation phase, its authors did not examine project budgets and resources in as much detail as CMB did for this effort. Therefore, some discrepancies are likely to result from the shifting of resources over time (see comments in Chapter 3.3) and measurement differences.

The other difference is that the leveraging study computed total Section 320 funds of \$1.13 million, \$144,000 higher than the figure used in the Implementation Review. As a result, the leveraging ratio computed in this study is 7.87:1, below the 9.3:1 figure derived from the Implementation Review – a difference readily explained by the differences in approach and 320 funding figures.

4.3.2 Other Leveraging Studies

This pilot was conducted partially as a follow-up to a 1998 effort to measure leveraging through a survey of NEPs performed by the Association of National Estuary Programs or ANEP.⁵

The ANEP study noted several difficulties with the analysis including lack of information for projects for which the NEP was not directly administering funds, differences in how comprehensive to be, and distortions in the sample due to very large spending levels for project partners in certain NEPs. For example, leveraged dollars in three of the NEPs accounted for nearly three-quarters of leveraged dollars for the entire sample of 23 NEPs. Clearly, deriving a meaningful average from these data would not be possible. Given these very large expenditures by partnering entities, the average leveraging ratio for the sample was 22:1.

To mitigate the impact of these outlier data points, the author computed the average percentage contribution of Section 320 funds relative to other sources. Following this approach, the average share of funds provided by Section 320 across this sample was 32%. This would imply a leveraging ratio of 2.1:1.

At the time of the study (1998), CBBEP (then the Corpus Christi Bay NEP) reported a leveraging ratio of about 1:1. As noted earlier, the leveraging ratio has increased since then each year and the average for 1999-2001 was 7.87:1.

While the methodology used in the leveraging study was different from that used in the ANEP study, the CBBEP figures are consistent with other estuary programs, especially adjusting for the outlier data in the ANEP responses. In order to conduct a more sophisticated comparison, CMB would have to use a consistent approach to collect data from other NEPs and make adjustments

⁵ *Op.cit.*, note 1.

for other factors affecting leveraging such as the age and size of the programs, their institutional setting, and whether or not the state provides budgetary support.

4.4 Limitations and Uncertainties

Before leaving the quantitative results, CMB has identified several issues to highlight the limitations of the data. Several of these issues echo concerns raised in the methodology discussion about what to include or exclude as CMB tallied total resources committed to CBBEP and the Bays Plan. To summarize the impact of the uncertainties, in all cases CMB believes it erred on the side of undercounting, rather than overcounting, resources. Therefore, the leveraging estimate should be viewed as conservative.

4.4.1 Resource Estimates are Dynamic

This exercise captures data from nearly 50 projects and CBBEP's operating budget as they stood in the Spring of 2001. The projects are all at different stages: some are still in the planning stage and not all the funding has been identified yet, others are in progress, and still others have been completed. CMB can be much more certain of the status of funds committed and spent on projects than for funds committed to projects that have not happened yet. As noted earlier, funds are often shifted among projects as priorities change or other funding opportunities arise. In-kind estimates are often just that and are frequently made at the outset of a project, rather than once the work is complete, so the actual effort expended on a project may be quite a bit different than was planned at the outset.

This examination of projects and budgets at different stages of a project's lifecycle results from the decision to focus on resources committed during the three year study period, rather than funds actually spent. For the reasons outlined in sections 3.1 and 3.2.1, CMB remains confident that this was the most appropriate approach, despite the uncertainty introduced over whether funds committed to a project will eventually be spent.

CMB can also be confident that this uncertainty is not likely to overstate the leveraging estimates or lead to double counting, because CMB was careful in limiting the focus to funds committed only during the study period. Even if funds included in the leveraging estimate were eventually reprogrammed or carried forward into a future year, CMB would not count them again in a future study. That is why a consistent approach on timing and "what to count" is important for the comparability of leveraging estimates.

Finally, much of the information collected for this analysis was compiled between April and June of 2001. Some changes in funding commitments may have occurred between then and the end of CBBEP's fiscal year in August 2001. CMB did not "loop back" with the project managers to review and verify all of the data compiled on the various projects. This report provides a summary of the figures, but CMB did not want to take the additional time to ask them to review the data in detail.

4.4.2 Other Projects That Improve the Bays Area

The research focused almost exclusively on projects that are part of CBBEP's work plans for 1999, 2000, and 2001. These projects are all linked to the CCMP and include at least some degree of involvement of the estuary program. It is likely that other projects are underway by local agencies, universities, research groups, corporations, and non-profits that affect the Bays area and may even involve CBBEP personnel, such as on advisory committees. CMB did include some related projects not in the work plans which met the criteria for CBBEP involvement, but it is possible there are others that were missed. This would tend to understate the amount of leveraging.

4.4.3 Non-Quantified Benefits of CBBEP Involvement

The existence of CBBEP and its involvement in projects in the Bays area have had benefits beyond the readily quantified funding estimates included in the analysis. As noted in reference to the shipping channel dredging project, the program's involvement may be a critical factor in making that project a reality; the economic consequences and associated benefits of the project would be substantial, yet cannot be easily reflected in the analysis. And it has been noted that CMB was unable to assign a reliable value to volunteer contributions which would further increase the leveraging estimate.

It is worth remembering that the fund-raising focus of the leveraging analysis is constrained by our ability to value only certain contributions to projects. To the extent that the involvement of program staff enhances the quality or value of a project to the community and the environment, the analysis understates the true reach of the estuary program and the leveraging made possible by the EPA Section 320 funds.

5. Lessons Learned and Next Steps

The purposes of undertaking a pilot study of leveraging were to develop a methodology, apply the methodology and compute leveraging estimates for an estuary program, and then to evaluate the value of the exercise. The evaluation is divided into three steps:

- C Reviewing the process followed to collect and analyze information and commenting on possible changes
- C Raising the most difficult issues likely to be faced in future studies, if any are performed, so CMB can consider whether the assumptions and approach taken in the pilot are appropriate
- C Evaluating the level of effort required and the value added by the exercise

5.1 Data Collection and Analysis Process

The most efficient way of obtaining the data was through an analysis of major revenue sources provided by CBBEP. This breakdown listed funding from the program's cooperative agreement with TNRCC (which incorporated EPA Section 320 funds and carry-forwards) plus major grants, SEP funds, and local funds (which were broken down by source in a separate analysis). This analysis accounted for about 75% of the total resources eventually included in the estimate. While some additional research was required to insure that all these funds should be included, focusing on the aggregate funding sources was the preferred approach (rather than trying to build-up the totals project-by-project).

In order to compile data on the remaining 25% of the resources, CMB went through a much more labor-intensive review of each project in the work plans. With project managers, CMB reviewed each project and identified whether additional resources were being contributed by partners or other entities. In many cases this required follow-up research to track down partners and interview them. This is how most of the in-kind contributions were identified. In some cases, project managers had this information available from grant applications or project completion reports.

Because of the need to go project-by-project and the concern with double-counting (for the carry-forwards from prior years), CMB maintained a detailed database of each project and each funding source. In other words, CMB created a data record for each contribution to each project. Then, CMB was able to sort and analyze the data either by project or by funding source.

As is typical, obtaining the data on the last 25% of the resources consumed the majority of our time, but it also captured a much greater diversity in funding sources and types of support than if CMB had focused only on the major sources.

For future efforts, this approach seems to provide a good model. Beginning with a request for work plans and general budget information lays the foundation for understanding the range of projects and the types of funding sources in use. Then, interviews with project managers to identify partners and other outside sources of support can be done more efficiently and with less burden on the estuary program. Of course, the value of well-kept records proved itself in this case as CBBEP staff were readily able to provide much of the information CMB needed.

Finally, the timing of the pilot would have been better placed closer to the end of a fiscal year. In that way, virtually all funding commitments for the year would be finalized. However, the workload for project managers at that time is probably greater because of work on the upcoming year, so the timing may have been a good compromise. Another option would be to conduct the pilot retroactively, soon after the start of a new fiscal year. By analyzing three years at one time, the number of projects and complexity of multi-year funding was greater than if the study had focused on a single year.

5.2 Key Issues to be Addressed in Future Studies

Three areas are particularly important to highlight before proceeding with future studies. All of these relate to including or excluding resources from the leveraging total and all relate to the estuary program's role in obtaining the funding

5.2.1 SEP Funds

Supplement Environmental Program or SEP funds figure prominently in the leveraged dollars included in this analysis, accounting for over \$2 million of the \$8.9 million leveraged. The rationale for including these SEP funds was that CBBEP played a significant role in directing how these funds would be spent. As noted earlier, the program was ready for the release of these funds with plans for spending them and for using them as critical matching funds to obtain large grants from other sources. These efforts go beyond "being in the right place at the right time" and easily met, in our view, the criterion established related to the role played by the estuary program in obtaining the funds. Had CBBEP served on a board with other organizations to discuss ways to spend the money, without providing specific plans or using them as match for other funds, CMB might not have drawn the same conclusion.

5.2.2 Resources Mandated by Permit or Other Requirements

Funds spent to mitigate environmental impacts or as permit conditions were not included as leveraging. The example reviewed earlier related to the Aransas Pass nature area and park, which CBBEP helped support. A mitigation project will add to the area and enhance the facility, so the estuary program could claim some role in laying the ground work for the additional funds to be spent in the area. The difference with permit or mitigation-related spending is that the funds are explicitly used to compensate for habitat destruction elsewhere. In ecological terms, there is no net gain from the mitigation project, only an offset. While this rationale is not

explicitly included in the criteria for the study, CMB believes it is consistent with the intent of the research.

5.2.3 Incremental Funding to Ongoing Efforts

Finally, CMB attempted to distinguish incremental funding to an ongoing project from seed money or similar core support required to get a project started. CBBEP provides support that enhances or expands the scope of existing projects, but is not critical to the project's execution. Examples of this were provided earlier and include the beneficial uses plan for dredged material from the shipping channel and the watershed management plan to mitigate the impacts of flood control and storm water projects on wildlife habitat. The larger projects were ongoing and would proceed with or without CBBEP's involvement. CMB only included as leveraging any funds provided by CBBEP for its piece of the project. This seems like a particular area where careful judgement could be required to determine if the estuary program's funding was essential to the project or simply an add-on. This criterion or something like it might be appropriate to add to the methodology for future studies.

5.3 Estimated Level of Effort and Value Added

This pilot effort included two different stages of effort. The first was to develop a general methodology for the analysis, to transform the project from the conceptual stage to an actual approach for collecting and analyzing the information. Our focus is on the second stage, which began when CBBEP was approached about its involvement in the project.

Figure 5-1 shows the estimated effort expended to date by CBBEP staff, EPA staff, and the contractor, beginning with a kick-off meeting held in Washington in March through the delivery of the draft report. CMB estimates that CBBEP staff (seven have been directly involved) have spent a total of 43 hours on the project, spread over five months. The contractor's hours on the pilot project total 182.

A number of variables affect how much would be required to repeat the analysis elsewhere. First, the CBBEP analysis covered a three-year period, thus triggering additional effort to monitor carry-over funds and double-counting. A single-year study would have less of this, although the carry-forward issue will always be present. Going back nearly three years also meant that CMB sacrificed some detail in the analysis, since information was no longer available to fully document in-kind and other contributions to older projects. Second, the number of active projects in which the NEP is involved would affect the scope of the review. CBBEP has about 50 projects in various stages of completion. The effort required to research and analyze funding sources would change proportionally with the number of projects.

Figure 5-1

Estimated Level of Effort (Hours) for CBBEP Leveraging Study

| Participants | Compile Preliminary Data | Site Visit | Data Collection and Analysis | Prepare/Review Report | Totals |
|----------------------------|-----------------------------|------------|---------------------------------|--------------------------|------------|
| CBBEP | | | | | |
| R.Allen (Exec.Dir.) | 2 | 2 | 3 | 4 | 11 |
| A.Sanchez (Contracts Adm.) | 4 | 6 | 4 | 2 | 16 |
| Project Managers | <u>2</u> | <u>10</u> | <u>13</u> | <u>0</u> | <u>25</u> |
| Subtotal | 8 | 18 | 20 | 6 | 52 |
| EPA Staff | 4 | 3 | | 12 | 19 |
| Northbridge | 22 | 12 | 93 | 55 | 182 |
| Totals | 34 | 33 | 113 | 73 | 253 |

The major advantages from compiling and presenting the leveraging data in a separate report are:

- C Consistency. The approach and assumptions used are documented so that others following the same approach at CBBEP or any other NEP would have generally consistent results.
- C Identify additional resources. CBBEP's initial review of major revenue sources over the three year period identified about \$7.6 million in funds committed during the study period. The research added approximately \$2.4 million to the total.
- C Additional detail. The analysis permits a systematic review and evaluation of funding sources. The research provides confidence in the reliability of the leveraging calculation and can be used to support leveraging claims made by EPA and the NEPs.