

Society for Applied Anthropology/USEPA  
Cooperative Agreement Internship with the  
Friends of the Estuary at Morro Bay, California

Final Report  
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### Project Background

Grassroots efforts to protect and restore the environmental quality of the Morro Bay watershed and its estuary reflect local goals to establish coordinated and effective community-based management of the natural resources and wildlife of the watershed bioregion. Located in the coastal county of San Luis Obispo, California, Morro Bay achieved State Estuary status in 1995 through intensive local action primarily organized by the Friends of the Estuary at Morro Bay to initiate the State Estuary Program in California (AB640 of the Ca. State Public Resources Code). National Estuary designation followed in 1996, establishing federal oversight of the area under the USEPA. The Morro Bay National Estuary Program (MBNEP) recently completed a Comprehensive Conservation and Management Plan (CCMP) that will guide environmental protection and restoration projects in the watershed during the next five years.

The effectiveness of local nonprofit environmental advocacy organizations to galvanize public support in the past has largely been due to broad-based volunteer participation that has in recent years begun to decline. Currently, a number of local environmental organizations, including the Friends of the Estuary, are faced with the challenge of rebuilding their membership base to reestablish educational outreach efforts, as well as to increase volunteer recruitment to maintain community participation in environmental enhancement projects. The latter is particularly crucial for stakeholder-based programs like the MBNEP that are structured to function through voluntary participation to achieve program mandates.

The Friends of the Estuary at Morro Bay, an environmental advocacy organization established in 1989, recently reevaluated the overall mission and goals of the organization. In redefining its mission, the Friends organization has made a commitment to help redevelop community participation through outreach and education efforts focused on building broad-based community understanding of the MBNEP and its goals to foster

environmental protection. As part of this effort, the Friends established an Education and Outreach Subcommittee, renewed its efforts to continue the Volunteer Monitoring Program, and will continue its role as a key supporting organization of the MBNEP.

The SFAA/EPA Technical Assistance Internship was developed to initiate a collaborative project developed by the Friends Education and Outreach Subcommittee to establish an annual multiorganizational newsletter, For the Common Good: Celebrating Successes, Collaborations and Innovations. Thirteen local environmental organizations agreed to take part in the publication project, completing the first issue of the new publication in September 1999. Plans to post the newsletter on a website were also endorsed by participating organizations, establishing Internet access to the newsletter.

Common Good was primarily designed as a tool for public outreach and volunteer recruitment for a broad range of community-based environmental enhancement projects that are currently underway or planned in the near future as part of implementation of the CCMP. The newsletter project has also served to establish a framework for active partnerships among local environmental advocacy organizations identified as potential implementers of the 61 action plans in the CCMP.

## II. Internship Goals and Objectives

Project goals initially developed by the Friends reflect common issues shared by a number of grassroots environmental organizations struggling to maintain and/or expand a stable volunteer base to support environmental enhancement projects. In a meeting organized by the Central Coast Natural History Museum State Park in June 1999, group discussion among representatives of fourteen locally-based environmental advocacy organizations identified a number of organizational needs that could be accomplished through participation in the newsletter project. They include four goals associated with the newsletter project:

Organize information in an easy to understand format about the wide range of environmental advocacy organizations at work in the local area, including recent achievements, ongoing projects and new projects in development; Increase volunteer recruitment to rebuild and expand current local involvement in volunteer-based projects; Increase communication among the core environmental organizations in the Morro Bay watershed to identify mutual goals for environmental protection, stay abreast of developing environmental news and emerging problems, and facilitate coordinated strategies for collaborative projects in the future; Develop an information network to help local community organizations and their members stay informed on local environmental issues, particularly those that relate to estu-

ary and watershed projects that also support goals of the MBNEP.

Based on the plan developed by the Friends of the Estuary for the newsletter project, an SFAA/EPA Technical Assistance Internship was assigned to the Friends for a five-month period on a part-time basis (12 to 15 hours/week). Specific tasks assigned to the internship provided assistance to the Friends Education and Outreach Subcommittee to accomplish the following objectives:

- Coordinate the newsletter project including developing and carrying out the production schedule with the volunteer technical team, and provide liaison between the Friends technical team, contact members of the participating organizations, and coordinate author participation;
- Conduct pre- and post-publication interviews with authors to help refine newsletter themes, goals and expected outcomes of the newsletter;
- Develop the budget and strategy to fund the publication project;
- Create a distribution plan, including investigation of establishing a watershed residents mail list database; and,
- Assess the potential for further demographic analysis to support new strategies for broad based volunteer recruitment, education and outreach in the future.

This report documents the work completed during the five-month internship period. The following sections present a description of the project area, historic efforts to develop community-based management strategies for the watershed, internship project methods and objectives, and discussion of internship outcomes and conclusions.

### III. Geographic Characteristics of the Morro Bay Watershed

The Morro Bay estuary and watershed are located in Central California in the coastal county of San Luis Obispo. The watershed region extends from the coast to approximately ten miles inland. The area encompasses a total of 48,500 acres of which 54% is designated rangeland; 32% is given over to institutional uses, including portions of two college campuses, a men's penal colony, and a number of state and county parks; 8% is developed residential area, providing housing for an estimated population of 27,000; and 6% of the watershed is under cultivation (Morro Bay State Estuary and Watershed Management Plan 1997, USDA 1993, California Coastal Commission 1987).

The residential area that surrounds the estuary consists of four communities located within the urban reserve in the coastal zone. They are the City of Morro Bay at the north end of the bay, and south of the estuary, the unincorporated area comprised by the adjacent communities of Baywood Park, Cuesta-by-the-Sea and Los Osos (for purposes of this

discussion, I will refer to the latter as Bay-Osos, commonly used in local reference to the area). It is estimated that there are approximately 100 to 125 farming and/or ranching operators in the rural residential areas located in the two main subwatershed systems, Chorro Valley in the north, and Los Osos Valley in the south (K. Kropp, personal communication 1999). The bay consists of 2,300 acres of mud flats, eel grass beds, tidal wetlands and open water. The average depth in the bay is 3í (NOAA 1990). The main channel in the bay, the Fairbanks Narrows, is maintained at a depth of 45í through periodic dredging by the Army Corp of Engineers. Natural habitat for migrating waterfowl, as well as estuarine spawning areas of marine species are protected as wildlife sanctuaries within the watershed. These areas include the four-mile sand spit on the western edge of the estero, Morro Rock in the north, various small reserves that provide habitat for nearly two dozen threatened or endangered species, and the Elfin Forest located in Bay-Osos. Los Osos Creek and Chorro Creek are the two significant subwatershed systems that drain into the bay (Morro Bay State Estuary and Watershed Management Plan 1997).

The harbor area of Morro Bay is home to a small fleet of fishing vessels and recreational watercraft. Docking facilities for privately owned vessels as well as kayak rental operators are provided by the City of Morro Bay and by the State Marina adjacent to Morro Bay State Park. There is one shellfish operation in the bay monitored by the State of California Department of Health Services.

There are also a small number of swimming areas in the bay, and public access to the bay includes launch areas for small watercraft such as kayaks and canoes. Seasonal hunting of Brandt is permitted between November 10 and December 9, annually (CDFG 2000). Shoreline areas and creek corridors are also utilized for recreational activities including walking and hiking paths enjoyed by humans and dogs alike, as well as horseback riding. The primary problems affecting the bay and estuary are the result of point and nonpoint source impacts associated with a number of activities in the bay and surrounding watershed. The biggest problem by far is due to soil erosion in the upper watershed causing sedimentation in the bay. Current studies of the effects of the power plant operations located at the north end of Morro Bay are underway to assess factors that may correlate with entrainment and tidal circulation problems. Problems with illegal mooring, live-aboards, and derelict vessels in the back bay area are also an issue of concern.

Agricultural and ranching runoff in the lower and upper Chorro Creek subwatershed system, as well as wastewater effluent and runoff from abandoned nickel and chromium mines are also contributing to measured pollutants entering the bay at Chorro Creek. Septic intrusion of the

watertable in the Bay-Osos area, as well as urban runoff and other drainage problems associated with the residential areas in Morro Bay and Bay-Osos also produce negative impacts to the health of the bay and estuary. Conflict over resource uses in the watershed has increased since the 1970s primarily due to growth in the local residential population in the watershed and economic development of tourism and recreational services. Uneven and conflicting management policies established by governmental regulatory agencies have also been the focus of local efforts to coordinate and improve management strategies to sustain traditional uses associated with agriculture, commercial and recreational fishing activities, as well as recreational pastimes such as camping, kayaking, hiking, bird watching and cycling. (Thomas 1992).

#### IV. Historical Development of Locally-Based Environmental Management in the Watershed

One of the first efforts to initiate cooperative management of competing uses in the watershed was organized in 1970 when the Morro Bay Task Force was created. This effort culminated in 1975 with a report endorsed by 23 local, state and federal agencies and 13 local citizens, identifying key problems resulting from overlapping and uncoordinated management jurisdictions in the watershed. This was followed in 1982 by the formation of an ad hoc committee organized by the California Department of Fish and Game to address and resolve growing animosity between local residents and sport hunters, many of whom did not live in the watershed communities year-round. This effort produced a series of changes and restrictions on hunting responding primarily to legitimate concerns for safety (McGibney 1992).

During this period, the regional and state structure of resource management was also undergoing change as a result of federal and state agendas for managing and protecting coastal resources. These include the federal Coastal Zone Management Act of 1972, followed by the California Coastal Act of 1976 (Coast & Ocean 1994, 1995). Equally significant changes in resource management practices occurred as the result of federal and state mandates under the National Environmental Protection Act of 1969 (NEPA) and the California Environmental Quality Act of 1973 (CEQA), requiring environmental impact assessments and a greater role for public participation in institutional environmental management processes.

In 1972, The Clean Water Act also targeted efforts to reduce water pollution and restore water quality in the nation's watersheds as a high priority requiring coordinated watershed management efforts (USEPA 1998). In 1981 the Morro Bay task Force was reestablished with the goal of coordinating nearly 60 agencies involved in water and land use management

in the watershed region (Russell & Richard 1992). This effort proved to be much more successful than the first attempt in 1970, eventually involving over 250 agency representatives and members of the local watershed communities. During the 1980s, a number of critical studies were conducted to determine the status of the environmental quality in the estuary and watershed region. Based on those early assessments, three priority problems were identified in the watershed: soil erosion in the upper watershed leading to increased sedimentation of the bay, and point and nonpoint urban discharge into Morro Bay from adjacent communities surrounding the bay.

By 1988 a coordinated effort to create two nonprofit organizations was organized in the community by the Morro Bay Task Force. The organizations were structured to serve two important functions: The Friends of the Estuary at Morro Bay, formed as an environmental advocacy and political action membership group, and a sister organization, The Bay Foundation, focused on developing and funding scientific research of the bay environment. The coalition between these two organizations resulted in designating Morro Bay as the first state estuary in California, establishing the State Estuary Program in 1994. In 1996, Morro Bay achieved National Estuary status, becoming one of 28 nationally protected estuaries. In May of 1997, the Morro Bay National Estuary Program Management Conference was expanded to increase local stakeholder participation in order to develop the MBNEP Comprehensive Conservation and Management Plan (CCMP).

Currently the CCMP is undergoing final review that completes a four-year watershed resource planning process involving over 700 participants. Implementation of CCMP action plans will begin officially in fall 2000. The MBNEP will then begin work to initiate a range of collaborative projects carried out by local, state and federal agencies. CCMP projects will also rely heavily on partnerships with community-based nonprofit organizations to develop essential local support and involvement in environmental enhancement actions mandated by the federal program. For at least 30 years, local environmental advocacy organizations have played a critical role in the process of determining sound environmental management policies to protect the ecological integrity of the Morro Bay watershed system. Responding through the formation of grassroots nonprofit organizations, many Morro Bay watershed community members have taken an active part in formal agency planning processes, educational outreach to the general community, and supported volunteer-based projects such as the Friends of the Estuary Volunteer Monitoring Program established in 1992.

Sustaining the efforts of effective grassroots organizations is an essential component of environmental management strategies that are designed to integrate regulatory, coop-

erative and voluntary participation to achieve coordinated change in traditional uses of the bay and estuary.

## V. Internship Methods and Objectives

On June 16, 1999, the project intern presented the plan for the newsletter project at the first meeting of the Estero Conservation Alliance (ECA), attended by fourteen local nonprofit organizations held at the Morro Bay Natural History Museum. Representatives of the local organizations agreed by verbal consent on that date to participate in the newsletter project. The following tasks were carried out by the project intern to coordinate the publication process, develop thematic content of the articles, and develop a funding plan to support publication and targeted distribution of the newsletter, including an assessment of demographic resources to support future public outreach efforts.

**TASK 1:** Coordinate the publication process including organizing and carrying out the production schedule, and provide liaison between the Friends volunteer technical team and authors of the participating organizations.

The production schedule for the newsletter project was developed to coordinate publication and distribution of the first annual edition of For the Common Good with the sixth annual Estuary Day held on September 12th, 1999. The Friends Executive Board also endorsed approval to post the newsletter on a website to be established for that purpose. An important component of the internship was to support communication needs during the production process for the first issue of the newsletter. Progress reports to newsletter authors were communicated via email and telephone throughout the production process and distribution of the newsletter. Progress reports on the internship and newsletter project were also presented monthly to the Friends Executive Board beginning in June 1999.

Initial interviews with newsletter participants were designed to provide an opportunity for each person to develop a clear understanding of the project and communicate particular goals for the project. Beginning with the editor and newsletter graphic artist, both volunteers to the project, interviews were conducted to clearly define the production support they would need during the process. Through this process, the production team established roles and specific responsibilities and tasks for completing the project on schedule. It was agreed that the internship would function primarily to coordinate production of the newsletter project. This included developing the publication budget, oversee costs for services and materials, as well as coordinate production and distribution of 600 copies

of the newsletter.

As project coordinator, I also agreed to take the lead in contacting each organization to identify individuals to author an article and coordinate submittal to the newsletter editor by August 2nd. Although the organizations involved supported the newsletter in concept, the details of the specific agreement and arrangements for other aspects of the publication were determined and finalized during the production process. This included problem solving on a daily basis to manage technical problems that developed during internet submittal of written articles to the editor, and between the editor and the graphic artist and printer. The need to provide consistent updates for each organization regarding changes and developments affecting the final publication was another aspect supported by the internship. A number of decisions that were made during the production process concerning nontechnical matters also became a focus of communication to help inform each organization, as well as provide feedback from each group to the production team to ensure understanding and agreement between all organizations.

**TASK 2:** Conduct ethnographic pre- and post-publication interviews with authors to help establish thematic content, as well as refine goals and expected outcomes of the newsletter project.

Coordinating communication of information during the project was an essential aspect of facilitating the publication process to a successful conclusion. In addition to frequent email and/or phone conversations with each author and/or organization contact person, pre- and post-publication interviews were conducted with six of the thirteen authors. In part this served to gain insight on each organization's goals and expectations going into the project, their views on how well the newsletter achieved those goals, as well as to enable the Friends to be responsive to issues and questions that developed throughout the publication process.

One of the first tasks of the newsletter project was to assist the Friends education subcommittee to develop a mission statement for the publication that became part of the information that I conveyed to each of the organizations. After review and approval by the Friends Executive Board, the concepts and ideas expressed in the statement helped to provide a foundation for the ethnographic interviews conducted with newsletter authors. The ideas incorporated in the newsletter mission statement reflect a number of goals that the Friends achieved in bringing together thirteen environmental organizations to collaborate on the newsletter project. The mission statement reads as follows

For the Common Good is a newsletter publication dedicated to recognizing community achievements that protect, conserve, or restore the natural

resources of the Morro Bay Watershed. Sponsored by the Friends of the Estuary, our goal is to identify mutual goals to protect the environment that are shared by diverse members of the greater community of San Luis Obispo County while preserving traditional land-use in harmony with environmental enhancement.

It is our hope that this publication will help to illuminate the common issues faced by our community in our efforts to manage watershed resources now and in the future. It is also our goal to highlight the tremendous accomplishments of community volunteers whose efforts make up the key ingredient to achieving sustainable policies and practices to maintain traditional uses and enjoyment of the watershed and estuary of Morro Bay.

The first interview was conducted with the newsletter editor to clarify and review information to present to each of the organizations in terms of her views on the purpose and focus of the newsletter, topics to include in the written article, as well as her overall goals in participating in the newsletter project. The interview was also an important step setting the pattern for interviews with five authors that agreed to pre- and post-interviews.

Efforts to identifying specific individuals willing and able to author an informative and well written article presented the first hurdle. The timing of the newsletter project caused some difficulty given that the publication schedule was set for the months of July and August when many people take their annual vacation. However, concerted effort with each organization eventually produced a list of potential authors. Five individuals were contacted directly by phone. Another individual approached me during a field tour of a watershed enhancement project, saying that she had heard news of the project. After a short discussion, she agreed to volunteer to author an article on behalf of her organization. Of the thirteen groups contacted, the remaining seven organizations either had no direct telephone access (i.e., no office base), or the contact number resulted in voice mail with no response. These groups were then contacted via the Internet with assistance from the Friends Executive Board members.

Follow-up phone calls and email continued through the production process that culminated on August 20th with the completion of 13 articles, including one written by the project editor on behalf of the Friends. Five of the 13 authors participated in extended pre-publication telephone interviews about the newsletter and specific role of the newsletter in meeting their organizational goals for 1999-2000. Overall needs, including education and public outreach, volunteer recruitment, information sharing, and developing collaborative projects were also discussed in the interview.

Post-publication interviews with the same five authors were carried out following completion and distribution of the newsletter to explore impressions of the publication as a whole, including their expectations based on the discussion at the environmental organizations' meeting in June, and information given to them during the phone interview. All five post-publication interviews were tape recorded and transcribed with permission of each individual. A summary assessment of the issues and concerns expressed by the participants in the project is presented in the final section of this report.

**TASK 3: Develop the budget and strategy to fund the publication project.**

As part of the newsletter project, the internship supported the development of a budget and grant writing to locate matching funds for publication costs of the newsletter. The initial plan was developed to occur in three steps: First to publish a small number of newsletters (600) to distribute at the annual Estuary Day celebration in September 1999. Second, develop a funding plan to publish and distribute by mail a copy of Common Good to every residence and business in the watershed by December of 1999. The third component of the newsletter plan included posting the newsletter on a website.

During the last two weeks of July, a grant proposal for a San Luis Obispo County Environmental Grant was drafted and submitted for review to the Friends education subcommittee. Approval by the full board followed, and the grant application was submitted by July 30th. On September 22nd, the Friends Executive Board received a grant award of \$750.

Following the award of the County Environmental Grant, the education subcommittee decided to reschedule the second printing of CG for sometime in the 2000. Discussion with ECA organizations at the meeting of October 20th produced consensus on a new plan for the Friends to continue fundraising efforts to underwrite publication of a second issue and mail distribution to every residence in the watershed in 2000. The newsletter publication is also listed in the CCMP as part of Education Action EDU-1, and may in part be funded by a MBNEP mini-grant during fiscal year 2000-2001.

**TASK 4: Create a distribution plan, including investigation of establishing a watershed residents mail list database;**

The first printing of (600) was distributed through a number of venues in addition to the Estuary Day event held at the Morro Bay State Park. Each organization received (20) copies, and CG was also made available to the public at local and county libraries, the MBNEP office, and the Morro Bay

Chamber of Commerce visitor's center. Copies of CG were also distributed at a number of community events including the Harbor Festival, Octoberfest, and the Audubon Winter Bird Festival. Copies of the newsletter were also distributed at the MBNEP CCMP public review meetings in Morro Bay and in Los Osos in October of 1999, and at a number of local public meetings held in those two communities during October and November.

In order to carry out a direct mail distribution of the newsletter to every residence in the Morro Bay watershed communities of Morro Bay, Los Osos, Baywood, Cuesta-by-the-Sea, and the rural residential areas of Los Osos and Chorro Valleys, creating a mailing database was also investigated during the internship. The database could also serve as a resource for volunteer recruitment and other outreach programs related to environmental advocacy goals.

The plan to establish a mailing database was organized to assess a number of potential outcomes:

- Identify existing mailing lists that could be combined to form a complete watershed mailing list to distribute the newsletter via direct mail;
- Work with the MBNEP staff to find ways to compile this information in a database format that will be compatible with other watershed data, including GIS format; and,
- Determine the potential for storing the database permanently at the MBNEP as an outreach resource for local environmental organizations.

Local organizations and agencies including the County Supervisor's office, offices of the state and federal representatives for this county, offices of the Chamber of Commerce within the urban reserve, and local mailing houses were contacted to determine available mail lists for the communities in the watershed. In addition, existing mail lists and files on community stakeholders developed by the MBNEP for the agricultural and rural regions of Chorro and Los Osos valleys were reviewed, as well as information developed by the Region IX EPA office in San Francisco. A number of private mailing services in the county offer mailing labels grouped by zip code areas. Costs and availability of labels were established and presented as part of the information provided to the Friends. Additionally, the local County Supervisor agreed to investigate the availability of this information from the Tax Assessor's files, including funding the cost charged by the Assessor's office to provide the information on disk.

The SLO County Planning Department was also contacted and following a meeting with a staff planner, it was determined that the county is in the process of creating a population database developed from integrating tax assessor information in GIS format. However, due to lack of funding, the

county project was terminated after completing GIS overlay population maps for the Bay-Osos area. Plans to continue the county map project are based on identifying funds to underwrite completion of the project. County-wide efforts to coordinate and index existing GIS data through SLOGIC, a local web-based organization, are discussed further in Task 5.

Several meetings were held with MBNEP staff members to discuss the potential for establishing a permanent mailing database at the MBNEP. It was agreed that this component of the newsletter project could be carried out by MBNEP staff in the new fiscal year (2000-2001) based on plans to upgrade computers, including new GIS and database software. The mutual benefits of the mailing database for the MBNEP as well as for other environmental advocacy organizations makes it likely that the MBNEP will participate in future plans to continue the annual newsletter publication, and through matching grants will support the watershed mailing distribution costs.

**TASK 5:** Assess the potential for further demographic analysis to support new strategies for volunteer recruitment and education outreach in the future.

Currently there is no demographic information easily accessible by local environmental organizations that would support targeted outreach and volunteer recruitment to particular groups based on defining characteristics such as age or home ownership, or other criteria such as parents of young children, single individuals, retired seniors, etc. The purpose of conducting this investigation was to identify existing population data that can be utilized to establish a demographic database, including creating GIS population overlays that could be available as part of the overall set of GIS data compiled of the watershed region for the MBNEP program.

During the second week of July, I began contacting local specialists in county agencies that house county-wide information on land use, planning, tax rolls, and voter registration. Information developed from websites on local GIS archives was also reviewed for potential sources of demographic data. In September, a meeting with the GIS technician at the Cal Poly GIS Lab gave me an opportunity to explore the ways in which census tract data could be integrated using Arc View GIS software. Based on this preliminary review assisted by a GIS technician, the goal to produce a population database linked geographically to the four communities in the urban sections of the watershed is feasible and could be created using existing census tract data.

This goal coincides with county-wide efforts organized by SLOGIC (San Luis Obispo Geographic Information Consortium) to create a GIS information

county database website. The website offers government agencies, academic sources, and the private sector the opportunity to use a 'metadata' format to create a catalog of existing GIS information, as well as to begin integrating regional information on a common scale. On August 30th, a GIS County Workshop was held at the SLO County Public Library to assist interested agencies and organizations to begin work on the metadata project.

Currently the majority of GIS data available for San Luis Obispo County is primarily natural resource oriented. Creating a GIS Morro Bay watershed map of population information based on U.S. census tracts could potentially add a significant and useful data set to local planning and management agencies. Following a discussion with a local GIS specialist for the Regional Water Quality Control Board, it was agreed that a GIS census map could be developed and produced as part of the MBNEP's set of GIS maps of the Morro Bay Watershed at some time in the future. The plan to carry out this effort will depend on the MBNEP computer and software upgrades planned for the new fiscal year.

## VI. Internship Outcomes: Lessons Learned

As a joint program of the Society for Applied Anthropology and the U.S. Environmental Protection Agency Office of Sustainable Ecosystems and Communities, the Technical Assistance Internship Program is one component of a five-year Cooperative Agreement to increase involvement of anthropologists and other social scientists in community-based environmental management processes. The final section of this report evaluates the structure and purpose of the internship from an anthropological perspective to assess:

- strategies that were involved in developing the scope and purpose of the
- internship project to meet particular local needs;
- problem areas of community-based environmental management efforts
- identified during the internship project; and,
- the role of social scientists in local environmental policy processes.

Internship Project Development Strategies: Initial plans to develop an SFAA/EPA internship project in Morro Bay began in January of 1999. The process required development of the scope and purpose of the internship to meet particular community needs related to environmental management goals.

Utilizing ethnographic methods, interviews with a number of key people in the community helped to shape a plan that met the internship criteria to carry out specific community objectives. These include actively involved residents, scientists, environmental specialists, as well as resource agency staff.

This process also resulted in discussions with community members unfamiliar with social science methods, and helped to develop understanding of potential social science approaches that could be developed in response to

actual needs and specific goals. The outcome of that experience helped to:

- 1) provide local insight and solicit feedback in the developmental stages of the internship to target pragmatic objectives that could most benefit from a social science approach;
- 2) generate interest of key community members and cooperative support for a successful outcome of the newsletter project by integrating their ideas early in the development of the scope and purpose of the internship plan; and,
- 3) increase the value and benefits to the community of the scope of work through understanding of the potential role of social scientists to facilitate grassroots participation in environmental planning processes.

The final form of the internship was structured through informal interviews and review of the internship proposal by members of the community reflecting a wide range of perspectives, interests and insight on the most effective use of intern support in the community. This included members and/or staff of the Friends of the Estuary, The Bay Foundation, the Morro Bay National Estuary Program, the Central Coast Regional Water Quality Control Board and the Natural History Museum State Park.

Additionally, the structure of the internship also required that two mentors be identified to participate in the project. One mentor was a member of the Society for Applied Anthropology, assuring that sound social science methods and protocols were developed for the project. The other mentor was recruited from the environmental community during the early stages of the interview process. The role of the community mentor was to provide insight and guidance throughout the field-based project, as well as review and comment on the internship proposal, progress reports, grant applications, and the final internship report. The combination of the two perspectives also assured that the internship was reviewed not only for methodological rigor, but also for measured effectiveness in meeting community needs.

**Common Problem Areas Identified During the Internship Project.** Priorities for the newsletter project developed through this process reflected a number of common themes that emerged across all discussions and interviews with both agency staff and members of nonprofit organizations. Foremost among the issues raised in considering the goals of the project was the need to increase educational outreach to increase support for sustainable policies for watershed resource management. This is equally true for governmental agencies as it is for the nonprofit organizations established as a means to create a role for grassroots involvement in this effort.

Although it is generally acknowledged across the board that educational goals to raise community awareness are critical to successful implementation of environmental protection policies, few agencies are staffed or funded to carry out this important task. This is particularly true of the MBNEP. Of the seven primary goals of the CCMP, community education and outreach needs are targeted priorities, equal to goals for environmental enhancement:

“Promote public awareness and involvement in estuarine management issues through outreach educational programs, and the use of volunteers in ongoing bay monitoring and other programs.” (P.4, April 2000).

In an assessment of the existing institutional resources to support implementation of the CCMP, a summary of “problems regarding the effectiveness of programs and suggestions for improvement” (p.56, *ibid.*), are detailed as part of the Base Programs Analysis (BPA) component of the CCMP. Twelve local agencies, 21 state agencies and 10 federal agencies were inventoried for their views and experience regarding the difficulty in achieving program mandates for environmental management. In summary, the majority of these agencies targeted the need to “improve public outreach” and “expand existing education and monitoring activities” (*ibid.*) as a significant issue. Based on the BPA analysis, final recommendations of the CCMP identify 6 key goals to improve coordinated effort and development of collaborative strategies to achieve program mandates, including increasing “public education and outreach” activities to support public acceptance and participation to implement the goals of the MBNEP (p.60, *ibid.*). Of the nine major priority action sections outlined in the CCMP, the educational component consists of 11 specific action plans, the highest single number of actions developed among all nine categories. This reflects an understanding of the fundamental relevance of raising community awareness of MBNEP goals and developing community acceptance of changes needed to accomplish those goals that emerged among the various environmental specialists, resource managers and citizen participants alike.

The importance of this aspect of the work of the MBNEP is clearly stated in the first chapter of the CCMP:

“To meet this challenge, the MBNEP, utilizing a committed group of diverse citizens and representatives from the public and private sectors, including government, industry, business, and environmental interests, has developed [the] CCMP to identify the steps to preserving and enhancing this extraordinary resource. The successful consensus-building and collaborative process used to develop this CCMP will provide the foundation for its implementation. Only by continuing to work together can the stakeholders of the Morro Bay Estuary ensure its environmental health and diversity for future generations.” (P.4, April 2000.)

However, the program lacks sufficient staffing as well as funding to carry out education and outreach goals. The unique structure of the national program also allows each individual NEP to determine the proportion of program resources that will be allocated to support public outreach and education efforts. Under these circumstances, education and outreach goals can often be perceived as “afterthoughts” to critical environmental protection efforts. Reliance on short-term strategies to identify funding sources for one-time only projects is also a given factor of the long term success of the NEPs under the present structure of support for education and outreach components of the program.

In a survey of potential funding sources produced for the finance strategy of the CCMP, educational grants are among the lowest number available, making this effort as difficult for resource management agencies as it is for nonprofit organizations, such as the Friends of the Estuary. This was one very important aspect of the appeal of the newsletter project. Coordinating a single publication designed as a collaborative effort by 13 different nonprofit organizations, all with the common need to increase public outreach and education, helped to elevate funding competitiveness for an educational grant from the county whose funding criteria clearly prioritized direct environmental enhancement and restoration over educational projects.

One other important goal identified in the CCMP and echoed in project interviews concerned the need to develop a collaborative structure to achieve environmental protection goals. A collaborative approach is also identified as the key implementation strategy of the CCMP, and therefore should be supported by the MBNEP. These groups provide access to well established resources in some cases, including volunteer support to accomplish much of the enhancement work directly, and are also focused on educating their members through organizational newsletters, websites, and through presentations at general membership meetings. Many of these organizations also maintain ongoing field-based activities including volunteer monitoring, natural history walking/hiking tours led by knowledgeable volunteers, as well as organizing annual events that provide opportunities to reach new audiences in the community. These include Estuary Day organized by the Friends of the Estuary, as well as Earth Day, Volunteer Recognition Day, and the Audubon Bird Festival.

In group discussions, all thirteen organizations indicated that although the desire to develop collaborative projects is high, the framework for this type of effort is difficult to design. This was also a theme that emerged in the newsletter interviews. This reflects a number of factors that also developed in the course of the newsletter project, and are potentially universal to all such endeavors.

Maintaining organizational identity is a key concern that nearly all the nonprofit organization members noted as a perceived major obstacle to creating effective future partnerships. Citing concerns that shared projects could lead to one organization being overshadowed by another was among the reasons given. In particular, in group discussions at ECA meetings, some organizations expressed concern that supporting MBNEP goals and projects could potentially lead to a loss of public recognition for their efforts, and presumably, to a loss of community support. Another critical aspect of partnered projects identified in newsletter interviews involves sharing responsibility for administering the funds efficiently to meet requirements of a grant. Initial development of funding proposals requires review and endorsement by nonprofit executive boards that usually meet once a month, requiring very long-term planning to identify appropriate grants. Once funding of a collaborative project is achieved, only one organization receives the funds and must develop an efficient method to orchestrate expenditures and reimbursement processes. In the long run, this presents additional complications and burdens the lead organization in the project with the task of maintaining funding arrangements between participating organizations.

Of the many issues cited during the newsletter interviews, one last critical aspect of nonprofit organization concerns should be discussed in this analysis. This involves the need to share some type of office space and/or telephone service to help increase responsiveness to community inquiries. Even if public outreach achieves goals to stir local interest and desire to participate, some organizations are not able to maintain a physical place where local residents can get information, ask questions, or even sign-up as volunteers for projects. When given the choice between raising funds for capital projects such as building a community center, or using limited resources to lease office space, few organizations believe they can maintain needed funds to support a facility, and at the same time fund critical environmental enhancement efforts. Seeking a common solution to this problem was identified as a goal among all the organizations participating in ECA discussions.

In summary, of the many issues cited as hurdles to overcome in the future to achieve increased community support for environmental protection, three common areas identified in the newsletter project remain as problems in need of solution:

- lack of funding for education and outreach needs to support institutional environmental management processes;
- developing a funding structure to support temporary, single project nonprofit partnerships; and
- assist environmental advocacy organizations to grow to their full capacity through identification of potential community resources for shared office

space to meet communication and volunteer coordination needs.

The Role of Social Scientists in Community-based Environmental Protection Processes. Understanding the role of social scientists and anthropologists in particular, in environmental protection and management processes is an important dimension of the internship that will be discussed in this final section. Although the goal of the Cooperative Agreement of the SFAA/EPA Internship Program is designed to facilitate the involvement of anthropologists, on a practical level, funding priorities do not support long-term involvement within regulatory agencies, or programs such as the MBNEP.

Although the newsletter project is largely seen as a great success among the participating organizations, and there is widespread recognition of the importance of the newsletter project in the community, this is but one small effort among many that must be developed through the nonprofit structure in the future. However, the newsletter project can provide a model for future projects to support successful efforts to organize and develop a collaborative structure on a broad scale that will facilitate multiorganizational partnering in the future. In particular, ethnographic methods can support:

critical communication processes to coordinate and maintain information sharing of participating organizations, development of well informed agreements between different organizations that specify roles and responsibilities of each organization including observing protocols involved with securing executive board approval and providing clearly written documentation of those agreements; and maintaining and coordinating an interorganizational project that involves individual volunteers not normally linked through any existing network or affiliation, throughout a project of several months.

Currently these types of collaborative projects can only occur if a nonprofit organization is able to locate a volunteer with the necessary skills and time to coordinate the development of such a project. Typically governmental resource agencies including the MBNEP, are primarily staffed by environmental specialists with no formal training in community outreach methods. Although mandated to develop educational support for programs and policies, this only occurs to the degree that an individual staff member is inclined to attempt. In some cases, biologists, ecologists, botanists and other natural scientists have developed these skills along the way, and have successfully implemented effective outreach programs.

However, the current level of effort needed to meet the demands and urgency of implementing outreach priorities to generate support and acceptance of environmental management policies cannot be accomplished by the same people that

are also responsible for coordinating and implementing environmental restoration projects.

As long as this remains the case, the role of nonprofits to provide the education and outreach component of environmental management efforts will continue to manifest at an inadequate pace to meet the needs. Bringing social scientists to this effort, to actively cultivate specific interests within the community, to expand outreach efforts within the community, and to help define existing community will and spirit to support environmental management goals, can help to elevate this effort to a higher level of success.

The newsletter project is but one example. The idea of the multiorganizational newsletter had been discussed among the newsletter participants for at least one year before its implementation. However, it was only through the support of the SFAA/EPA Technical Assistance Internship that it became possible to generate the necessary links between participating organizations, getting the project off the ground and completed as envisioned. It remains for governmental programs to recognize the value of social science methodology to support urgent education and outreach efforts at the community level, and to increase the focus and level of support for this component within the institutional framework of community-based environmental management processes.