Knowledge, Attitudes, and Perceptions of Tourists and Coastal Users in Morro Bay
How Environmental Quality Affects Recreational Behavior

A 2008 Group Project Proposal

Proposed By:
Alexandra Brown, Breanna Flanagan,
Michael Mosley, Trevor O’Grady

Faculty Advisor:
James Frew
**TABLE OF CONTENTS:**

- Table of Contents.................................................................................2
- Abstract.............................................................................................3
- Executive Summary...........................................................................4
- Project Objectives.............................................................................6
- Stakeholders......................................................................................6
- Significance.......................................................................................6
- Background Information.................................................................7
- Approach..........................................................................................10
- Management Plan............................................................................13
- Deliverables......................................................................................16
- Timeline............................................................................................17
- Milestones.........................................................................................19
- Budget..............................................................................................20
- Budget Justification..........................................................................20
- Contact Information..........................................................................21
- References Cited...............................................................................22
ABSTRACT:

This project will characterize the general recreational user in Morro Bay, California by evaluating user recreational activities, recreational expenditure patterns, and perceptions of environmental quality. The economy of Morro Bay was historically supported by a thriving fishery located in an ecologically sensitive estuarine environment. In recent years, the commercial fishing industry has been in decline, leading to changes in the local business structure. This decline highlights the need for information on the changing local economy in Morro Bay. City managers and the Chamber of Commerce have teamed with the San Luis Obispo Science and Ecosystem Alliance (SLOSEA) to establish connections between the effect of environmental perceptions of Morro Bay on visitor activities and spending. Intercept surveys will be administered to residents and tourists during the summer of 2007. Results will be analyzed to determine specific relationships, such as the effect of environmental perceptions on recreational activity choices and expenditures, in the Morro Bay area. This survey will initiate a long-term study of how environmental perceptions influence recreational activities that support the economy.
EXECUTIVE SUMMARY:

Little is known about the influence of ecosystem conditions on visitation and recreational spending in coastal fishing communities. This lack of data motivates an investigation of the knowledge, attitudes, perceptions, and spending patterns of visitors and coastal users in Morro Bay. This group project aims to determine connections between these variables by implementing an in-person intercept survey, in association with the San Luis Obispo Science and Ecosystem Alliance (SLOSEA) and Dr. Linwood Pendleton and Allison Chan from the UCLA School of Public Health. Dr. Pendleton is the lead investigator for the SLOSEA Economic Indicator Project. SLOSEA was established to develop knowledge of the Morro Bay ecosystem and the economy it supports. SLOSEA addresses local environmental issues by integrating ecological and economic problem-solving through the Pressure-State-Impact-Response Model. The model illustrates linkages of human activities and the environment. Pressures from human development and growth exert a state of change in the bay. This state change impacts the community in terms of goods and services derived from the ecosystem. These impacts fuel a response from the community, which goes into shaping policy decisions.

Morro Bay is no longer a pristine and fully functioning estuarine environment. Pollution, sedimentation, and surface water runoff impact the bay ecosystems and water quality. Ecological conditions of the estuary and surrounding environment could potentially influence the tourism industry and local economy. Local policy makers would benefit from understanding the relationships between environmental quality, perceptions, and spending to determine the economic impacts of environmental decisions. Data will be collected and analyzed from an intercept survey of visitor and resident activities, expenditures and environmental perceptions. The survey will supplement historical data and an additional phone survey to better inform policy makers and local officials. The survey results and analyses will also be valuable to local resource managers and the Morro Bay business community since connections will be identified between the management of the bay and effects on tourism. This information will contribute to a better understanding of whether an increase in tourism may offset recent declines in the local commercial and recreational fishing.

Research has shown that visitors to coastal areas impact the local economy through expenditures that support jobs related to dive charters, hotels, eateries and other services (Pendleton and Rooke 2006). Similarly, wildlife viewing contributes a significant amount to coastal economies in California. Saltwater fishing is another recreational activity that is popular locally and across the nation. Significant revenues are generated from the nearly 21.3 million people that participate in this activity due to their expenditures on equipment, goods (ice and bait), services (fishing guides, boat rentals) and access (Leeworthy 2001). One aspect of the group project survey will be designed to capture accurate expenditure data on these and other relevant tourist activities.

Perceptions are influenced by several factors, such as residents’ trust in local officials, and general public opinion, which are influenced by publicity and newspaper coverage (Faulker et al. 2001). In addition, studies by Johnson and Chess (2006) and Petrosillo et al. (2007) found that gender, ethnicity, education, income, cultural ties and possibly speaking English as a second language are all factors that affect views of environmental trends and problems. These factors
are important in developing pre-judgments concerning an acceptable level of environmental
damage. Exposure to the area of concern, personal use of a resource, and socio-economic factors
such as age, prior education level and work experience also influence a person’s perception of
environmental quality (Faulkner et al. 2001). Variations in responses to surveys are due to
proximity of residence to the subject of interest, reported environmental affiliations, and
frequency of visits to the subject of interest. Our survey is meant to capture environmental
perceptions and the factors that help shape them.

We will be administering an in-person intercept survey at various points on the Morro Bay
waterfront from June 2007 through September 2007. The surveys will answer five major
questions.

1. How do visitors access and/or interact with the estuarine environment?
2. What environmental factors are most influential in deciding to come to Morro Bay?
3. What are user perceptions of different types of water quality in Morro Bay? For
   returning visitors, what are their impressions of environmental change in the Bay?
4. How do visitors rank the ecological health of Morro Bay compared to other estuaries and
   coastal areas in Central California?
5. How much money are visitors spending in Morro Bay? Are these expenditures
   influenced by perceptions of environmental and ecological conditions? Do they differ
   across different types of visitors?

This survey will provide information on the linkages between perceptions of environmental
quality and spending patterns on recreational and leisure activities. Analysis of the data will also
determine the accuracy of these perceptions, which will help to better understand the
implications of policy change on perceptions. When repeated over time in conjunction with
historical data, survey results will help characterize the connection between bay management and
recreational expenditures, and serve as an effective policy tool.

The survey will be administered according to accepted protocol. For each survey, the surveyor
will record the time, location, and name of the surveyor. Surveyors are to be non-discriminatory
in choosing respondents. Survey results will be digitized and periodically examined for bias
(e.g. spatial, temporal, surveyor) during the data collection phase so that the survey process can
be adjusted accordingly.

We will collect data on recreational/tourist expenditure patterns, environmental perceptions (of
Morro Bay overall, of Morro Bay over time, and of Morro Bay compared to other locations),
visitation rates, reasons for visiting/recreating, length of stay, activities pursued, habitats used,
and demographic data. We will also make use of historical economic data from the working
waterfront collected through SLOSEA in parts of our analyses.
**PROJECT OBJECTIVES:**

This project will develop a survey that collects information on, and determines linkages between, recreational activities, expenditures and environmental perceptions in Morro Bay. This survey will also serve as a prototype for similar surveys to be administered by SLOSEA along the California Coast. Using information gathered by the survey, we plan to address the following questions:

- How do people spend their leisure time in Morro Bay? With which habitats do they interact?
- How does recreational spending contribute to the local economy?
- What are the perceptions of the environmental quality in Morro Bay over time and compared to similar ecosystems in Central California?
- Do these perceptions affect the amount of money spent on recreational/leisure activities? What are the relationships between environmental perceptions, recreational activities and expenditures?
- How accurate are environmental perceptions compared to historical data?

After addressing these questions, we will make connections to management and policy decisions concerning the Morro Bay estuarine environment and recommendations for further study.

**STAKEHOLDERS:**

City of Morro Bay Residents and Government  
City of Morro Bay Chamber of Commerce  
San Luis Obispo Science and Ecosystem Alliance (SLOSEA)

**SIGNIFICANCE OF THE PROJECT:**

Many small coastal cities are experiencing significant economic impacts as a result of changing California state policies and reductions in ocean productivity. Very little research has been done on the effects of these changes. Vacationers historically fish, camp, and swim while in Morro Bay. These activities along with other recreational activities are linked to a particular visitor’s perception of environmental quality in the bay. Declining environmental quality may cause negative perceptions, thus reducing the number of vacationers/recreational users in Morro Bay. Additionally, perceptions of environmental quality may affect spending patterns and length of visits to the area. However, environmental quality and public perception of environmental quality are not inextricably linked (Pendleton 2001). More detailed information needs to be obtained on the character and accuracy of perceptions for more complete understanding of the impacts of environmental changes on local economies.

This survey is a mechanism to determine connections between environmental quality and recreational activities and expenditures. We will study how individual perceptions of environmental quality in Morro Bay relate to personal characteristics and affect each visitor’s
actions. This information will serve as the baseline for characteristics of the general recreational user of Morro Bay, will aid in the formation of future surveys along the California Coast, and will combine with other information collected by SLOSEA to better inform policy decisions. Figure 1 summarizes the significance of this project in forecasting policy effects.

**Figure 1**: This diagram illustrates the steps in determining the effects of environmental policy changes on the local economy. The boxes in yellow delimit the scope of our project. Phone survey data and historical indicator data collected by SLOSEA.

**BACKGROUND INFORMATION:**

*Marine Activities and Economic Effects*

Visitors to coastal areas impact the local economy through expenditures that support jobs related to dive charters, hotels, eateries and other services (Pendleton and Rooke 2006). An estimated 1.38 million dives were made in California in 2000 alone and potential expenditures per diver per day range from $100-$200 (Leeworthy and Wiley 2001). Total possible expenditures ranged from $138 million to $276 million in 2000. Similarly, wildlife viewing contributes a significant amount to coastal economies in California. Direct revenues are generated by boat-based whale watching and add up to more than $158 million in expenditures annually (Hoyt 2001). Net revenues are estimated to be between $4 and $9 million annually in the state (Pendleton 2006). Saltwater fishing is another popular recreational activity locally and across the nation. Significant revenues are generated from the nearly 21.3 million people that participate in this activity nationwide (Leeworthy 2001). Local expenditures of anglers are related to equipment, goods (ice and bait), services (fishing guides, boat rentals) and access. Annual California
Expenditures related to recreational saltwater fishing was estimated to be $205-$545 million in 2000 (Leeworthy and Wiley 2001).

Environmental Perceptions

Environmental perceptions pertaining to Morro Bay influence tourist activities, such as fishing and bird watching. Managers of these natural resources should acknowledge people’s awareness and perception of environmental change as mediating variables when examining the effects of their decisions on local environmental quality (Ruth et al. 2005). Any modifications of policies regarding use permits or changes in natural resources conditions can potentially affect how often visitors will visit an area (Siderelis and Moore 2006).

Individual perceptions are influenced by several factors, such as residents’ trust in local officials and general public opinions, which are influenced by publicity and newspaper coverage (Faulker et al. 2001). Furthermore, gender, ethnicity, education, income, cultural ties and possibly speaking English as a second language affect views of environmental trends and problems (Johnson and Chess 2006, Petrosillo et al. 2007). These factors are important in developing pre-judgments concerning an acceptable level of environmental damage. How individuals select and rank environmental indicators has been found to vary with the following factors: exposure to the area of concern, personal use of a resource, and socio-economic factors such as age, prior education level and work experience (Faulkner et al. 2001). These factors are also likely to condition (mis)perceptions of the science underpinning the problem (Faulkner et al. 2001). Other factors, such as proximity of residence, frequency of visits to the area of interest, and reported environmental affiliations, affect responses to surveys of environmental perceptions.

Our survey is meant to capture the determinants of people’s environmental perceptions of the bay. It will provide information on the linkages between perceptions of environmental quality and spending patterns on recreational and leisure activities. It will also provide information on the accuracy of perceptions, which will help us better understand the implications of change in policy on the local economy.

Survey designers must keep in mind that older people are more likely to find the indicators hard to understand (Johnson and Chess 2006). Therefore, questions must be asked in a simple, easy to understand context. Additionally, most respondents are unaware what ‘good’ and ‘bad’ environmental quality is. These characteristics must be clearly defined. For example, in a study performed by Faulkner et al. (2001), respondents were asked to rate a number of characteristics as water quality indicators. The presence of ‘many fish, and of kingfishers’ was felt to be the best indication of good water quality, whereas foam, oil or dead fish were perceived to indicate the worst water quality.

Expenditure Surveys

Travel and vacation research has yielded many insights regarding the accuracy of expenditure survey data and the driving forces of expenditures in vacation settings. A study by Fish and Waggle (1996) found that total household expenditures are the strongest variables in forecasting trip spending. However, the percentage of expenditures that occurs on trips decreases as income
increases. This finding is supported by the idea of a family cycle: different stages in a family are reflected by differences in vacation spending (Lawson 1991). For instance, families with older children spend more on accommodation, meals, tours and shopping. Alternatively, families with younger children spend the most on entertainment. Nature visitors, such as birdwatchers, hikers, and campers, tend to spend more money per trip (and more per day) than other visitors, according to an Arizona study (Leones et al. 1998). Whether a person is a nature visitor has a positive and significant effect on expenditure levels. Other factors that had a positive effect on spending included the number of local attractions visited, the trip length, and the point of origin.

Accuracy of expenditure surveys is affected by the time that has passed since spending occurred. Howard et al. (1991) found that participants significantly underestimated overall daily expenditures immediately after spending occurred. However, Zhou (2000) found that visitors tend to overestimate expenditure when a significant amount of time has passed.

A recreation site contributes to a region's economic growth through purchases of trip-related materials (Bergstrom 1994). The local economic impact of tourism and recreation goes beyond direct activity expenditures. Participation in recreational activities can affect the economy indirectly by spending on accommodations, meals, and other items (Bull 1991). Recreational expenditures are recycled through the local economy through increased wages and spending. Therefore, recreational economic contributions should be measured using a multiplier on actual expenditures (Frechtling et al. 1999).


**APPROACH:**

We will be administering an in-person intercept survey at various points on the Morro Bay waterfront, from the fourth week in June through the third week in September (dates subject to minor change).

**Survey Methodology**

George Gallup demonstrated during the Roosevelt/Landon presidential election of 1936 that a properly administered survey can accurately predict the actions of many by measuring the actions of a small sample (Thelen 1976). In this example, Gallup’s survey predicted a Roosevelt win, while every other poll predicted a Landon win by significant margins. Gallup’s survey design incorporated an accurate spatial sample and an effective set of questions. When Roosevelt won despite the odds in 1936, the Gallup poll became the most popular survey method in every discipline.

A properly designed survey yields clear and accurate data for analysis, but every type of survey has distinct advantages and disadvantages. Due to greater length and detail, mail and web-based surveys can gather the most information, but are very impersonal and unlikely to be returned (Pendleton et al. 2000). Telephone surveys allow communication and clarification, but are very expensive and depend on accurate phone records. In-person and intercept surveys are the most interactive, but must be kept short to ensure accurate answers by those questioned. Each survey method can yield slightly different results and response rates when administered to the same population.

Morro Bay is a small coastal city that is dependent upon tourism and recreational activities. Other surveys conducted successfully along the California coast have been administered as intercept surveys. Examples include an expenditure survey administered to determine Southern California beach activities (Pendleton et al. 2000), and a survey administered to measure expenditures related to recreational activity on and around the Channel Islands (Wiley and Leeworthy 2001). Each survey was less than two pages in length and restricted to questions about environmental quality, expenditures, activities, or some combination of these factors.

Proper writing of the survey tool is essential to developing a convincing survey result. Questions must be sequential, simple, clear, and non-manipulative without asking too much at once (a phenomenon known as “double-barreled” questions). The question format also affects how data taken from the survey can be analyzed. Question formats, such as number scale, yes/no, multiple response, or scaled response, all have different implications for analysis (Rea and Parker 2005). Other surveys in this area of study use a simple combination of question types. Multiple response, scaled response, and other complex questions are generally reserved for the end of the survey. The expenditure surveys conducted by Pendleton et al. (2000) are good starting points for designing and administering the Morro Bay survey.
Survey Formation

In order to prepare the Morro Bay survey, at least 5 steps will be taken.

- **Literature Review** – Relevant literature on survey methodology, Morro Bay history, and related studies will be researched in order to form initial survey goals.

- **Exploratory Survey** – We will compose an abridged version of our official survey. It will be conducted on the Morro Bay waterfront, with a target sample of 50 respondents. The purpose of the survey is to gain perspective on the survey process, gain knowledge of the area, and acquire other relevant information to guide the survey design. Data collected will not be used in the final project. *Exploratory Survey was completed on April 28th 2007 (48 respondents).*

- **Expert Feedback** – Drafts of surveys will be sent to our clients and other experts periodically for criticisms and feedback. Surveys will be adjusted accordingly.

- **Focus Group** – A polished draft of the survey will be administered to a focus group of frequent visitors to Morro Bay. We will encourage feedback on clarity and appropriateness of questions.

- **Preliminary Survey** – After all edits have been made, we will conduct a preliminary survey in Morro Bay over the span of 1-2 days before the intended start date of our official survey. Results will be analyzed to determine whether the timing and location of surveys are appropriate and if any additional edits are needed. Results may or may not be used in the final project depending on subsequent edits.

During our exploratory survey we found that our proposed survey was easily understood by visitors to Morro Bay, but that many of the questions were not clear to resident respondents because they were designed for visitors. As a result, two different surveys were created – one for residents and one for visitors. The survey questions were then modified for the type of respondent with an effort to ensure that specific data will be collected consistently across the two survey types.

We plan to use our preliminary survey results, historical information, and expert advice to pick relevant locations and times for the survey. If enough information is gained to make an accurate judgment of the population of interest we may divide the population into strata and attempt to take a random stratified sample in order to improve precision during certain analyses. If strata are not developed, then we will attempt to take a simple random sample of the population to minimize bias.

We will adopt the target sample size of 200-400 usable surveys recommended by our clients, who have extensive experience in administering related surveys.

Survey Protocol

- The survey area will encompass the Morro Bay and Los Osos waterfront, estuary and surrounding coastal state parks (herein referred to as the Bay).

- For each survey, the surveyor will record the time and location of the survey, and the name of the surveyor.

- Surveyors will chose respondents randomly by selecting the first person in sight after each completed survey.
• Survey results will be entered into a computer in Morro Bay.
• Results will be periodically examined for bias (e.g. spatial, temporal, surveyor). The survey process will be adjusted accordingly throughout the sampling period.

Data Collection and Analysis

We will collect data on recreational/tourist expenditure patterns, environmental perceptions (of Morro Bay overall, of Morro Bay over time, and of Morro Bay compared to other locations), visitation rates, reasons for visiting/recreating, length of stay, activities pursued, habitats used, and demographic data. We will also make use of historical economic data from the working waterfront collected by SLOSEA in parts of our analyses. Statistical analysis will be conducted using STATA Intercooled 9.0.

Statistical Questions to be Addressed:

1. How accurate are perceptions of ecological and estuarine conditions in Morro Bay? Responses will be compared to historical data. Percent accuracy will be reported with corresponding confidence intervals.

2. What personal characteristics affect the accuracy of perceptions of estuary quality? The probability of a correct response (CR) will be modeled using logistic regression with the basic form: \( \Pr(CR) = \frac{1}{1 + e^{-(\alpha_0 + \alpha_1 x_1 + \alpha_2 x_2 + \ldots)}}. \)

3. What is the relationship between perceptions and recreational activity of choice? To better understand how perceptions and recreational activity interrelate, we will perform a cross tab analysis on the data collected.

4. What is the relationship between perceptions and habitat type visited? To better understand how perceptions and habitat type interrelate, we will perform a cross tab analysis on the data collected.

5. Do perceptions affect recreational and leisure expenditures? Expenditures (E) will be the dependent variable in an OLS regression that includes a dummy variable (P_x) for each category of perceptions, and relevant control variables. It will have the basic form: \( E = \beta_0 + \beta_1(P_1) + \beta_2(P_2) + \beta_3(A) + \ldots + \epsilon \)

6. What is the impact of recreation/tourism on the local economy? First we will estimate the total expenditure on recreation and tourism. We will then choose a standard economic multiplier into which we will enter the data to determine local impact.

In addition to addressing these questions we will provide summary statistics on response rates, and other relevant data.
**MANAGEMENT PLAN:**

The Management Plan outlines the structure of the group, including expectations for the group members, advisors and clients involved in the project. Conflict resolution, information cataloguing, writing guidelines and meeting procedures are also addressed.

**Team Member Roles and Responsibilities**

- **Individual Responsibilities**
  - **Scheduler and Client Contact** – Breanna Flanagan
    - Schedules weekly advisor and Group Project meetings and occasional client meetings
    - Takes minutes at every meeting and distributes them as a Word document to each group member
    - Reserves meeting rooms and makes other arrangements needed
    - Communicates with clients and external advisors regularly via emails
    - Maintains documentation of upcoming deadlines/action items
  - **Data Manager and Principal Surveyor** – Alexandra Brown
    - Manages group directory and all shared files on campus drive
    - Manages group email list
    - Drafts survey for approval by group members and clients
    - Administers survey during Summer 2007
    - Supervises SLOSEA intern involvement
    - Maintains database of survey records
  - **Web Manager and Data Analyst** – Trevor O’Grady
    - Designs and maintains project website
    - Interfaces with the Bren Compute Team
    - Designs data analysis procedures for survey results
    - Assigns group members tasks related to data analysis and oversees results
  - **Financial Manager** – Michael Mosley
    - Maintains budget and tracks expenses
    - Provides budget updates
    - Interfaces with Bren staff on financial matters
  - **Editor** – Rotating among group members, contingent on relative workloads
    - Compiles and edits writing assignments from team members
    - Incorporates feedback from other members and advisors into final draft
    - Submits final documents

- **Shared Responsibilities**
  - **References:** Electronic references will be stored in the group directory using the EndNote program in the “References” folder. All group members will add to the file as necessary, including the references from their own writing. Hard copies of all references will be managed in the shared group storage area. Group members will notify everyone when they remove any hard copies.
  - **Contact List:** All contacts made by any group member will be stored in the contact list, including any notes or relevant information concerning specific calls or interactions. The contact list will also serve as a running “thank you” list
**Editing:** Each team member will be assigned a portion of each required document and everyone will perform an initial edit on the first draft of each document. Authors will incorporate the initial edits and subsequent editing will be completed by the Editor. In addition, an outside editor will be employed to look over the final product. The final draft will be approved by all group members before official circulation.

- **Survey editing:** Each draft of the survey will be edited by all group members. The initial draft and significant changes will be reviewed by the clients and advisors until a final draft is agreed upon by all involved persons. After the preliminary survey trial, another round of editing will ensure that the survey is ready for the summer data collection period.

**Meeting Structure:**

- **Schedule:** The group members will meet once weekly with the Group Project advisor (James Frew) for approximately an hour to an hour and a half. In addition, the group members will meet weekly, without any advisors, for one to two hours. Additional client and external advisor meetings will be scheduled as needed, by the scheduler.
- **Agendas:** Agendas will be prepared and emailed to all meeting attendees at least one day in advance by the scheduler, for each advisor and client meeting. Meetings without advisors and clients will be discussed at least one day beforehand and goals will be set by email. Formal agendas will not be prepared unless needed. Agendas will be stored on the shared drive in the “Agendas” folder and access will be open to the advisor and all group members.
- **Minutes:** The scheduler will record minutes at every meeting and will post them in the shared “Minutes” folder in a timely manner. Tasks for each group member will be clearly listed in the minutes, along with upcoming deadlines.
- **Meeting Content:** Meetings will include:
  - Updates from each group member regarding individual tasks
  - Review of any documents or data analyses in progress
  - Assignments of future tasks
  - Deadline reminders

**Time Management/Deadlines:**

- A project timeline will be maintained by the data manager and will document all deadlines
- All major deadlines will be added to the Corporate Time agendas of all group members.
- The scheduler will add all meetings to attendees’ Corporate Time agendas and will send out reminder emails about meetings and deadlines via Corporate Time.
- Individual tasks and deadlines will be reviewed at each meeting.

**Conflict Resolution Process:**

- All group members will put forth their best effort to be honest with each other and to be supportive of each person’s involvement in the process. Constructive criticism regarding individual efforts and overall group progress will be received in an open manner at all group meetings and in any other relevant contexts.
- Conflict between the faculty advisor and group members will be addressed openly in an appropriate setting. If no solution can be reached, an external mediator within the Bren school will be consulted.
• Conflict between group members will be addressed as follows:
  o Issues will first be addressed amongst the group members involved, in a neutral
    setting, such as the Bren Hall Commons or Bonsai Room, with all group members
    present.
  o If no resolution is agreed upon, the faculty advisor will be enlisted to help alleviate
    the situation. A plan that includes all group members will be generated to resolve the
    conflict.
  o Any group member who does not adhere to the conflict resolution plan will be
    confronted in a neutral setting. If the problem continues, the Bren administration will
    be consulted as a last resort.

Documenting and Archiving Procedures:
The shared computer drive provided by the Bren school will house all relevant documents in
subject-labeled folders, such as “Agendas”, “Minutes”, “Contacts”, “Proposal”, “References”,
etc. These files will be accessible to all of the group members. In addition, each group member
will have their own file to keep drafts of documents and relevant information. If these
documents are needed by the entire group, they will be moved to a general group folder. Every
edited version of a document will be maintained in the “Documents” folder. Outdated version
will be stored separately from current ones. Document titles will always include the date of
editing in the following format: yyyy-mm-dd. Hard copies will be maintained in the shared
group storage area and will be filed by document type (Proposal, Brief, etc.).

Group emails sent to morrobay@bren.ucsb.edu will be archived.

Expectations of Faculty Advisor:
The listed expectations can be amended as necessary with consent of the advisor and group
members. They are meant to provide a framework for a working relationship.
• Attend weekly meeting with group members.
• Attend occasional client meetings as requested by the clients and/or group members.
• Provide direction for the overall momentum of the group project, without controlling the
  efforts of individuals.
• Deliver constructive criticism on specific documents, project scope, deliverables and group
  interactions.
• Mediate conflicts as necessary.
• Prepare written evaluations at the end of each quarter.

Expectations of Student Group Members:
Additional expectations may be added by the group or faculty advisor as needed.
• Fulfill responsibilities of the organizational roles outlined previously.
• Attend all group meetings and prepare by reviewing agenda, bringing relevant materials and
  completed tasks.
• Complete tasks in a timely manner and adhere to all set deadlines.
• Produce quality work that is of exceptional caliber and represents the standards of the Bren
  School.
• Maintain professional conduct in all group project settings.
• Be open to suggestions and constructive criticism from all group members, advisors and clients.

**Expectations of Clients:**
The expectations may be amended as needed by the clients or group members. The expectations are currently as follows:
• Attend at least two meetings a month to provide in-person feedback to the group members.
• Provide data or other useful information as needed.
• Present constructive criticism and advice on the overall progress and direction of the project, as well on specific documents and deliverables.
• Support contacts between group members and relevant stakeholders in the Morro Bay area.

**DELIVERABLES:**

As discussed with Dr. Linwood Pendleton and Allison Chan, the specific deliverables are as follows:
1. Hard copies of completed surveys.
2. Survey prototype and sampling strategy that can be easily reproduced.
3. Summary of metadata (Percent/response rate) and summary statistics of responses.
4. Analysis of the accuracy of perceptions compared to historic environmental indicators.
5. Analysis of the influence of personal characteristics on nature and accuracy of stated perceptions.
6. Analysis of relationship between environmental perceptions and recreational expenditure patterns.
7. Limited economic impact analysis of environmental policy actions.
**TIMELINE:**

**Spring Quarter 2007:**

April 30, 2007  
Literature Review Teaching Lesson: Each member of the group will teach key findings to the other members. Each Group member should have about 5 questions to begin writing the rough draft of the survey. A framework of the proposal should be in progress.

May 7, 2007  
Rough draft of proposal should be completed. Meeting with Allison Chan to present rough draft of survey. Will also present literature review to Allison. Begin revising proposal and survey.

May 16, 2007  
Proposal due to faculty advisor.

May 31, 2007  
External Review of proposal with Jim Frew, clients, and additional faculty members and key players. Begin working on final draft of survey and map.

June 1, 2007  
Website should be up and running

June 8, 2007  
Final draft of proposal due. Report on Proposal Review due to faculty advisor. Self/peer evaluations due to Group Project Advisor. Faculty advisor provides group with written evaluation.

**Fall Quarter 2007:**

November 16, 2007  
Progress Review must be completed

November 30, 2007  
Written Progress Report due. Self/peer evaluations due to Group Project Advisor. Faculty advisor provides group with written evaluation.

**Winter Quarter 2008:**

February 8, 2008  
Group Project Defenses. After external reviewers provide feedback, begin revisions.
March 22, 2008  Deliverables must be completed by the end of finals week of winter quarter (March 17 – 22). This includes final report, brief, and poster. In addition, presentation should be prepared and reviewed by Jim Frew so the content is perfect by Thursday, March 17th. BJ will videotape practice presentations on Thursday, March 20th and Friday, March 21st.

Spring Quarter 2008:

April 2, 2008  Group Project Presentations at the Doubletree Hotel
MILESTONES:

On May 16, 2007, our proposal shall be submitted to our faculty advisor, Jim Frew. After Jim provides feedback, we will send the updated proposal to additional faculty that we are requesting to be part of the proposal review, such as Charlie Kolstad, Matthew Kotchen and Chris Costello; external faculty, such as Gail Osherenko and Mike McGinnis; and our clients, Dr. Linwood Pendleton and Allison Chan.

On May 23, 2007, all group members will attend the SLOSEA Advisory Committee meeting in Morro Bay. The committee is interested in meeting with us and actually taking the survey. We will emphasize that the survey is a rough draft and we are looking for feedback.

A new draft of the survey should be completed by May 31, 2007, in order for a preliminary survey to be given in Morro Bay in early June.

May 31, 2007 is our proposal panel review. Panel reviewers will receive the proposal and survey a minimum of five days in advance.

The final version of the survey and proposal should be completed no later than June 8, 2007, which is the official last day of classes.

The final survey draft will be submitted to the Office of Research at UCSB for final approval by June 12, 2007.

On June 28, 2007, group members, Lexie Brown and tentatively Trevor O'Grady, will attend the Business Forum meeting in Morro Bay to inform business owners of the intention of our survey. This will prevent any hostility while surveying outside of their businesses.

On February 8, 2008, the group project team will be ready for group project defenses.

By March 17, 2007, the presentation should be prepared and reviewed by Jim Frew so the content is perfect.


By March 22, 2008, deliverables must be completed by the end of finals week of winter quarter (March 17 – 22). This includes final report, brief, and poster.

On April 2, 2008, Group Project presentations will be held at the Doubletree Hotel.
BUDGET:

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey Administration</td>
<td>$1,500</td>
</tr>
<tr>
<td>Travel Costs</td>
<td>$400</td>
</tr>
<tr>
<td>Basic Telephone</td>
<td>$22</td>
</tr>
<tr>
<td>Software</td>
<td>$77</td>
</tr>
<tr>
<td>Printing</td>
<td>$200</td>
</tr>
<tr>
<td>External Reviewer</td>
<td>$200</td>
</tr>
<tr>
<td>Final Presentation</td>
<td>$300</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>$101</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$2,800</strong></td>
</tr>
</tbody>
</table>

BUDGET JUSTIFICATION:

The Economic Indicator Project of the San Luis Obispo Ecosystem Alliance (SLOSEA) has allocated an additional $1500 for survey costs. This funding is added to the $1300 allocated by the Bren School for a total budget of $2800. Administering the survey during the summer of 2007 will use the entire $1500 allocation. Some local activities, presentations, or meetings will require the group to travel, such as the SLOSEA quarterly Advisory Committee meeting. For these activities, $400 is allocated to cover mileage and other miscellaneous expenses. The telephone and printing expenses cover group work that is performed in Bren Hall. Dr. Pendleton recommends STATA statistical software for analysis of survey data. The software expense of $77 covers a one year license for the software so that our analysis and conclusions can be given to the Economic Indicator Project group in a useable format. Final preparations will require $500 for an external editor to review the final report for accuracy and flow, as well as a presentation board, handouts, and other materials. An additional $101 is reserved for any unforeseen expenses not otherwise covered. Adjustments or changing priorities will be addressed by the group through the Financial Manager as they arise. This budget and justification will be updated within one business day to reflect these changes.
CONTACT INFORMATION:

Faculty Advisor:
James Frew frew@bren.ucsb.edu

Project Members:
Trevor O’Grady togrady@bren.ucsb.edu
Breanna Flanagan bflanagan@bren.ucsb.edu
Michael Mosley mmosley@bren.ucsb.edu
Alexandra Brown abrown@bren.ucsb.edu

Clients:
Dr. Linwood Pendleton linwoodp@ucla.edu
Allison Chan allisonchan@ucla.edu

Faculty Reviewers:
Charlie Kolstad ckolstad@bren.ucsb.edu

External Reviewers:
Gail Osherenko gail.osherenko@gmail.com
Michael McGinnis mcginnis@lifesci.ucsb.edu

Other Information:
Project Email morrobay@bren.ucsb.edu
Website http://fiesta.bren.ucsb.edu/~morrobay/
REFERENCES CITED:


